BUSINESS ACCOUNTING

HAROLD DUDLEY GREELEY, C.P.A., *Editor*

Volume I—Theory of Accounts
By Harold Dudley Greeley

II—Constructive Accounting
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III—Cost Accounting
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By Charles F. Rittenhouse and Harold Dudley Greeley

Business Accounting

File Greeley

VOLUME V

ILLUSTRATIVE ACCOUNTING PROBLEMS

By

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EDITORIAL PREFACE

Ten years ago almost any contribution to the literature of accountancy would have been welcomed. Today, however, with the increasing number of excellent publications, it is incumbent upon one who puts forth a new accounting work to justify his action. Much more is it necessary to explain the publication of a set of accounting books. Hence it is desirable to state at the outset the purpose of "Business Accounting" and to outline its scope and general methods of presentation.

While many books have been published on accounting topics, in almost every case they are unrelated volumes. In some few instances, a volume on accounting has logically followed another by the same author, but with these few exceptions every one published has been written without connection with, or adjustment to, any of those already existing. Under these conditions, the student of accounting, to get any connected and logical knowledge of his subject, must find one of his books here, another there, a third somewhere else, and bridge over the gaps between them as best he may. The process is difficult, and the accounting knowledge he obtains is not always well co-ordinated and logically developed.

The volumes of "Business Accounting" are intended to meet this situation. They cannot, it is true, provide a course of study in the sense that prescribed readings are recommended, written answers to questions required, and personal instruction given. Neither do they constitute an encyclopaedia of unconnected and isolated articles. Rather are they an attempt to present in simple, non-technical language the basic principles of account-keeping and their application to various lines of business, together with general directions for preparing, analyzing, and interpreting accounting statements.

One who starts at the beginning of Volume I and works faithfully through to the end of Volume IV, and then solves the problems and examines the solutions of Volume V, should acquire some real understanding of the theory and practice of accounts—a knowledge that, supplemented by experience, should enable him successfully to stand the test of practical work in any ordinary business office and furnish a foundation for going as much further into the study of accountancy as he may desire.

It may be noted in passing that the volumes of "Business Accounting" have been indexed in such a way as to provide many of the features of an encyclopaedia, so that the person desiring the practice on a particular point or accounting ideas of suggestive value in particular lines of industry will be able to use the set to advantage.

Taking up the volumes of the set in order—Volume I presents the fundamental principles of account-keeping and statement preparation. Upon these basic principles all systems of account are built. Volume II explains the principles governing the development of the simple accounting procedures described in Volume I to meet the needs of more complicated and more extensive systems of financial accounting. Volume III explains in much the same way how the basic principles have been applied to factory or cost accounting. Having thus traced the fundamental principles into more elaborate financial and cost accounting procedures, Volume IV treats accounting principles and practices which are more advanced than the basic ones described in Volume I. These advanced principles are in most cases subject to differences of opinion, as to their nature or application, among persons qualified to deal with them, and it is for this reason that their discussion is confined to Volume IV. Supplementing the illustrations of accounting principles and statement preparation, there follows in Volume IV a practical discussion of the methods of verifying accounts and statements and of their interpretation and analysis.

The set closes with Volume V, which gives a number of problems of a practical nature, together with their solutions. The working of these problems will not only clarify the reader's ideas but in many cases will provide models upon which he can base accounting procedures and build statements to meet concrete situations arising in his own work.

The readers to whom this set will appeal most strongly may be divided roughly into two classes. There will be, on the one hand, business and professional men, bankers, office managers, and other executives who feel the need of understanding in a general way the methods of modern account-keeping and statement preparation. There can hardly be excuse nowadays for them to consider bookkeeping methods and accounting statements as too complicated to understand or of such slight importance as to merit no attention. They need a grasp of the subject so that they may judge for themselves whether bookkeepers and other persons who keep accounts for them and render statements to them are giving information which is accurate, adequate, and presented in the most intelligible form. The entire tendency of modern business and civic life is toward more exact accounting, of which the accounting requirements of the present income tax legislation are but one indication. Any person having substantial interests at stake should be able to appraise intelligently the stewardship of those to whom his interests are intrusted and the volumes of "Business Accounting" will give him the technical information this demands.

The other class of persons to whom "Business Accounting" will appeal is composed of those whose duty it is to keep accounts and to prepare statements. They should find in this set an inspiration and an aid to more intensive study, which in turn will result in improved accounting ability and an enhanced wage. The careful and intelligent use of these books will lead beyond question to increased power of service to employer and community.

Harold Dudley Greeley,
Editor, Business Accounting Set.

New York City,
April 1, 1920

PREFACE

Assuming a thorough knowledge of the theory of accounts and the method of their keeping, accounting ability is then developed by the training of the mental faculties in the art of reasoning and of making logical deductions from given premises. The problems in this volume have been collected with this object in view. Where the source of a problem is not indicated, it has been either compiled or selected by the authors because they believe that the practice work involved in its solution will prove valuable as a means of impressing important or difficult points of accounting theory on the student's mind; the problems taken from the examination papers of various C. P. A. examination boards have been selected with a view to covering as wide a field of accounting as possible; the problems which relate wholly to cost accounting procedure have been compiled by D. C. Eggleston, M. E., C. P. A., author of Volume III of this series and assistant professor of cost accounting in the College of the City of New York.

Bookkeeping may be compared to the routine work of the factory operative; accountancy to the designing, planning, and control of this work. Thus, between the routine work of the bookkeeper and the professional work of the accountant the broad distinction may be drawn of a daily task which is endlessly repeated and a task in which the daily problems are never quite the same. It is possible to impart a working knowledge of bookkeeping by the mechanical process of exercise and drill in the manner of recording business transactions—as the factory operative learns his trade. It is impossible to become an accountant by any system of drill in account-keeping or by any method of grouping like accounting problems and studying the method of their solution.

It has been the intention of the authors to present a series of problems the solution of which is based on theory of accounting as developed in the preceding volumes; but it is not expected that every difficult point involved in the solution will become clear by referring to the discussion bearing upon that point in the preceding volumes. So far, however, as theory and illustration can be helpful in the working out of problems the solutions of which depend upon the exercise of the analytical and reasoning faculties, this help is afforded by the "tie-up" between each problem and the points of accounting theory which it illustrates—as indicated in the notes which follow the solutions.

With the "Points Illustrated" to guide him, and with the necessary amount of mental perspiration, the student, it is hoped, will find in this book ample practice work of the kind which develops analytical accounting ability and leads to a mastery of the subject of accountancy.

Charles F. Rittenhouse
Harold Dudley Greeley

April 1, 1920

Illustrative Accounting Problems

Illustrative Accounting Problems

Problem 1

The cash book of a firm at a given date showed a balance available amounting to $10,000. The firm's bank pass-book showed a balance of $10,010. The firm had deposited checks $3,264, which had not been collected by the bank and for which no credit had been given. They had also issued various checks which had not been presented for payment, the numbers and amounts thereof being as follows:

337	$200.00
351	400.00
352	750.00
355	586.00
356	182.00
357	241.00
360	346.00
361	150.00
362	125.00
363	294.00

Required:

Statement reconciling cash book and pass-book.

Solution to Problem 1

RECONCILIATION

Balance, per pass-book	$10,010.00
Add—Checks not credited	3,264.00
	$13,274.00

Deduct—Checks outstanding:

337	$200.00	
351	400.00	
352	750.00	
355	586.00	
356	182.00	
357	241.00	
360	346.00	
361	150.00	
362	125.00	
363	294.00	3,274.00
Balance, per cash book		$10,000.00

Points Illustrated in Problem 1

(a) Bank Reconcilement. This solution follows the lines proposed in Volume I, Chapter XX, § 12.

Problem 2

The cash book of a general trading concern shows for the month of January, 1912, the following:

Receipts

1912		
Jan. 4	Collections from customers	$ 2,818.62
7	" " "	1,147.33
10	" " "	1,064.87
13	" " "	1,232.55
16	" " "	1,463.24
23	" " "	2,417.14
26	" " "	1,283.84
29	" " "	1,543.62
31	" " "	1,054.27
	Total receipts, per cash book	$13,925.48

Disbursements

Jan.	1	Overdraft on bank	$ 10.32
	3	Sundry checks	2,153.27
	7	" "	1,427.83
	11	" "	926.84
	15	" "	853.87
	19	" "	428.32
	23	" "	647.83
	29	" "	2,437.38
	31	Balance as shown by cash book	5,029.82
			$13,925.48

Cash on hand undeposited amounted to $56.23.

A petty cash fund is operated on the imprest system.

The books had been audited to the 31st of December, 1911, and the fact established that the overdraft of $10.32 was correct, after all checks drawn had been presented and paid by the bank.

The deposits in the bank for the month of January, as shown by the bank pass-book, after having it balanced at the close of business January 31, amounted to $13,854.37, and the checks returned by the bank for the same period totaled $8,832.43.

There were checks outstanding at the time of balancing, January 31, amounting to $53.27.

Fraud is suspected on the part of the cashier, and you are asked to check the transactions recorded by him as shown in cash book.

Prepare a statement showing the results of your investigation. Also state, with reasons, what further documents and records you will require, if any, to trace the cash transactions fully.

(Ohio C. P. A. Examination.)

Solution to Problem 2*

Exhibit A

BANK STATEMENT AND RECONCILIATION

1912				
Jan.	1	Debit balance O/D	$ 10.32	
	31	Debit total checks cashed	8,832.43	$ 8,842.75
		Credit deposits		13,854.37
		Credit balance pass-book		$ 5,011.62
		Deduct outstanding checks		53.27
		Company's bank balance		$ 4,958.35
		Add—Cash on hand		56.23
		Company's actual cash		$ 5,014.58

Exhibit B

RECEIPTS, DEPOSITS, AND DISBURSEMENTS

Receipts and Deposits:			
January cash book receipts		$14,025.48	
Less—Cash not deposited		56.23	
Receipts that should have been deposited		$13,969.25	
Actual deposits		13,854.37	
Actual shortage in deposits, January 31			$114.88
Cash Book Disbursements:			
As footed on cash book in January	$8,885.34		
Less—To correct error	10.00	$ 8,875.34	
Bank Disbursements:			
Actually paid in January	$8,832.43		
Checks outstanding as issued	53.27		
Disbursements that should appear on cash book		8,885.70	
Disbursements in excess of cash book (Exhibit C)		$ 10.36	

*Solution by W. P. Kohr, C. P. A.

Exhibit C

CASH BOOK—STATEMENT AND CORRECTIONS

1912				
Jan. 31	Receipts per footings			$13,925.48
	Add—To correct error in footing			100.00
				$14,025.48
1	Balance overdrawn		$ 10.32	
31	Disbursements, per footing	$8,885.34		
	Deduct—To correct error	10.00	8,875.34	
	Add—To correct, per checks drawn (Exhibit B)		10.36	8,896.02
31	Cash book balance			$ 5,129.46
	Less—Bank balance and cash on hand (Exhibit A)			5,014.58
	Net amount of shortage (Exhibit B)			$ 114.88

Points Illustrated in Problem 2

(a) Reconcilement of Bank Balance. The necessity for and method of reconciling bank balances are explained in Volume I, Chapter XX, § 12.

(b) Verification of Balance on Deposit. The advisability of having the balance on deposit verified by the proprietor or some one entirely in his confidence is pointed out in Volume IV, Chapter XXXII, § 8.

Problem 3

The Universal Company handles its currency disbursements by the imprest system. As of January 1, 1920, the amount of the fund is $1,000. At the close of each month, the petty cashier submits to the treasurer a statement of payments for the month, and receives the amount required to replenish the fund. The voucher system is not used.

On January 31, 1920, a statement is received from the petty cashier showing payments of $462.50. These are analyzed by the bookkeeper as being chargeable to the following accounts:

General Administrative Expense	$212.60
Selling Expense	191.40
Manufacturing Expense	58.50

It is decided as of this date to reduce the fund by $200.

Show entry or entries for accomplishing the above.

Solution to Problem 3

On the credit side of the cash book a check for $462.50 should be entered and charged as follows:

General Administrative Expense	$212.60
Selling Expense	191.40
Manufacturing Expense	58.50

This check should be cashed and the money placed in the petty cash fund, thus restoring the fund to $1,000. Thereupon $200 should be withdrawn from the fund and deposited in the bank. An entry to cover this item should be made on the debit side of the cash book, the credit being to the Petty Cash account.

Points Illustrated in Problem 3

(a) Imprest Petty Cash Fund. This problem illustrates the operation of an imprest petty cash fund as described in Volume I, Chapter XX, § 15.

Problem 4

A manufacturing concern buys its raw product from comparatively few dealers. A simple purchase journal has been in use since the company began business, in which only invoices of stock purchased are recorded. Accounts with individual creditors are kept in the general ledger. In revising their accounting methods it is decided to install a voucher system and to discontinue the accounts with individual creditors. This change takes place as of July 1, 1919. On that date, the following creditors' accounts appear in the trial balance taken from the general ledger:

Thomas Groom and Son	$ 496.85
R. W. Irwin and Company	1,138.00
George Newton Company	912.55
Begg and Bragg, Inc.	637.50
General Chemical Company	48.90

Make such entries and accompanying comments as would be necessary to give effect to the change.

Solution to Problem 4

In order to install the voucher system, a voucher register must be opened and the first entry in it will be to record the five following vouchers:

Thomas Groom and Son	$ 496.85
R. W. Irwin and Company	1,138.00
George Newton Company	912.55
Begg and Bragg, Inc	637.50
General Chemical Company	48.90

These vouchers should be numbered and entered in the vouchers payable column, but they should not be distributed to purchase or expense accounts. They should be entered in the sundries column of the voucher register, to be debited to the individual accounts payable with these various creditors now appearing on the ledger.

Points Illustrated in Problem 4

(a) Controlling Account. The purpose and use of controlling accounts are explained in Volume I, Chapter XXIV, § 4.

(b) Voucher System. The theory underlying the voucher system and a general description of its methods of operation, together with forms, are explained in Volume I, Chapter XXII.

Problem 5

A mercantile concern which began in a small way and with a few customers has always kept its accounts with customers in the general ledger. The number of such accounts has increased to such an extent that it is now desired to transfer all accounts with customers to a loose-leaf sales ledger and to establish a controlling account therewith in the general ledger.

Using the following customers' balances as of January 1, 1920, show how the transfer of accounts and the opening of the control account would be effected:

James Conway and Company	$ 63.90
Henry Jones	197.63
Thomas W. Small	212.15
Charles W. Cutter	94.50
L. W. Hunter and Company	147.96

Solution to Problem 5

To close out the customers' accounts in the general ledger, and to set up a controlling account for a sales ledger, the following entry would be made in the journal:

Accounts Receivable	$716.14	
James Conway and Company		$ 63.90
Henry Jones		197.63
Thomas W. Small		212.15
Charles W. Cutter		94.50
L. W. Hunter and Company		147.96

Points Illustrated in Problem 5

(a) Need for Controlling Account. This problem illustrates the need for controlling accounts in order to insure convenience and speed in handling the numerous details. For a general discussion of the functions of controlling accounts, see Volume I, Chapter XXIV, § 3.

(b) Opening Entry. The entry opening the controlling account is in accordance with the plan outlined in Volume I, Chapter XXIV, § 4.

Problem 6

Brown has a customers ledger, a purchase ledger, and a general ledger, the latter containing controlling accounts with the other two. When his bookkeeper submitted to him trial balances of the three he observed that White owed him $100, subject to a cash discount of 2½%, and an allowance for outward freight of $1.68, neither of which items had been entered in the books; and that he owed White $100, subject to a discount of

4%, which had not been entered. He directed the bookkeeper to adjust the accounts by a remittance of stamps. Draft entry or entries that will close the two personal accounts and maintain the reconcilement of the ledgers. Separate accounts are kept for customers' discount and purchase discount.

(*Massachusetts C. P. A. Examination.*)

Solution to Problem 6

Accounts Payable (White)	$100.00	
Discounts on Sales	2.50	
Freight and Cartage Out	1.68	
Accounts Receivable (White)		$100.00
Discounts on Purchases		4.00
Postage		.18
(Explanation to set forth all the details of the entry.)		

Points Illustrated in Problem 6

(a) Unusual Transactions. As pointed out in Volume I, Chapter XXIV, § 12, care must be exercised in recording unusual transactions such as the one in this solution, to make sure that the controlling account is adjusted for every item posted in any detail account. If this procedure is not followed, the controlling account will be thrown out of balance with the subsidiary ledger.

(b) Cash Discounts. For a discussion of cash discounts and the proper method of recording them, see Volume I, Chapter XXV.

(c) Anticipation of Cash Discounts. Cash discounts depend entirely on promptness of payment and thus are earned and should be recorded only when taken at the time of payment. In this solution the cash discounts are taken by the settlement of the mutual accounts. (See Volume I, Chapter XXV, § 8.)

Problem 7

A and Company sold to B and Company a bill of goods for $1,000—terms 2% 10 days, net 30 days.

B and Company did not take advantage of the cash discount, but, when the invoice was due, offered in settlement cash $333.34 and two notes for $333.33 each, one at 60 days and one at 90 days, due at their bank.

A and Company accepted this settlement, and carried the notes for 30 days. They then discounted them at their bank at 5%.

B and Company paid the 60 days' note when due.

Three days before the 90 days' note was due, A and Company received from B and Company a 30 days' note for $200 due at B and Company's bank, and a check for the balance plus the discount on the new note at 6%, with a request that A and Company take care of the 90 days' note, which they agreed to do.

A and Company discount the new note at 5% at their bank when they take up the 90 days' note.

The $200 note is paid by B and Company when due.

Journalize the above transactions for A and Company.

(*Pennsylvania C. P. A. Examination.*)

Solution to Problem 7*

The transactions as specified in the above question can be expressed by means of the following journal entries:

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*Solution by E. P. Moxey, C. P. A.

B and Company	$1,000.00	
Sales		$1,000.00
Sold bill of goods 2/10, net 30.		
Cash	333.34	
Notes Receivable	666.66	
B and Company		1,000.00
Received cash and notes in settlement of account.		
Cash	662.49	
Bank Discount	4.17	
Notes Receivable Discounted		666.66
Discounted notes of B and Company at bank. Rate of discount, 5%.		
Notes Receivable Discounted	333.33	
Notes Receivable		333.33
Note of B and Company due today and paid by maker.		
Cash	134.33	
Notes Receivable	200.00	
Notes Receivable		333.33
Bank Discount		1.00
Received from B and Company cash and new note in renewal of their 90-day note.		
Notes Receivable Discounted	333.33	
Bank Discount	.83	
Notes Receivable Discounted		200.00
Cash		134.16
Payment of B and Company's note due today and discount received from B and Company.		
Notes Receivable Discounted	200.00	
Notes Receivable		200.00
Note of B and Company due today and paid by maker.		

Points Illustrated in Problem 7

(a) Cash Discounts. For a discussion of the nature of cash discounts and the proper method of recording them, see Volume I, Chapter XXV.

(b) Time of Taking Discount. See Volume I, Chapter XXV, § 8, for a discussion concerning the time when cash discounts become effective and may properly be recorded.

(c) Provision for Future Cash Discounts. As pointed out in Volume I, Chapter XXV, § 16, at the time a balance sheet is prepared it is sometimes advisable to provide for possible losses due to the taking of cash discounts by customers.

Problem 8

A corporation has been accustomed to charge the purchase of machinery to the Machinery account at cost, and each year to charge the Manufacturing account and to credit a Reserve for Depreciation account with an amount which will offset the cost of the machinery by the time it is estimated that it will be advisable to scrap the machines. During the period that you have been employed to audit the account, you find that the corporation has sold two machines for $500 each, and this amount has been credited to the Machinery account. One of them cost $1,000, and the amount reserved for depreciation on this machine is $600. The other cost $1,500, and the amount reserved for depreciation is $850.

Make the adjusting entries to correct the books.

Solution to Problem 8

Reserve for Depreciation	$600.00	
Machinery		$ 500.00
Surplus		100.00
Machine costing $1,000 sold for $500, on which $600		

had been reserved. Entry previously made: Cash, debit, to Machinery, credit, for $500.

Reserve for Depreciation	850.00	
Surplus	150.00	
Machinery		1,000.00
Machine costing $1,500 sold for $500, on which $850 had been reserved—loss charged against Surplus. Entry previously made: Cash, debit, to Machinery, credit, for $500.		

Points Illustrated in Problem 8

(a) Bookkeeping for Depreciation Reserves. The method of recording depreciation reserves is discussed in Volume I, Chapter XXIX, § 4.
(b) Replacements. The bookkeeping to record replacements is discussed in Volume I, Chapter XXIX, § 5.
(c) Surplus Adjustment. The necessity for adjusting surplus, capital, undivided profits, or other similar accounts to record items applicable to prior fiscal periods is discussed in Volume IV, Chapter VII, § 4.

Problem 9

A machine costing $10,000 was estimated to have a life of ten years, with a residual value of $1,000. At the close of each year a charge of $900 was made and a similar amount credited to Reserve for Depreciation. Just prior to closing the books at the end of the tenth year the machine was discarded and sold, bringing $2,000, and a similar machine was bought costing $15,000. Give the journal entries that you would make to close the books at the end of the tenth year in order to cover these transactions and to make necessary adjustments. Interest is not to be calculated.

Solution to Problem 9

Depreciation	$ 900.00	
Reserve for Depreciation		$ 900.00
To set up the 10th and last annual reserve for depreciation.		
Cash	2,000.00	
Machinery		2,000.00
To show sale of old machine for cash.		
Reserve for Depreciation	8,000.00	
Machinery		8,000.00
To charge the loss due to replacement to the reserve account.		
Reserve for Depreciation	1,000.00	
Surplus		1,000.00
To restore to Surplus the amount of reserve in excess of the actual loss due to replacement.		
Machinery	15,000.00	
Cash		15,000.00
To show purchase of new machinery.		

Points Illustrated in Problem 9

(a) Depreciation Reserves. The nature of depreciation reserves and the bookkeeping necessary to record them are outlined in Volume I, Chapter XXIX, § 4.

(b) Retirement of Assets. The bookkeeping procedure to record the retirement of assets when their useful life has ceased is described in Volume I, Chapter XXIX, § 5.

(c) Surplus Adjustments. In Volume IV, Chapter VII, § 4, the necessity for adjusting surplus or other similar account to record items applicable to prior fiscal periods is discussed.

(d) Straight-Line Depreciation. The depreciation in this problem was calculated on the straight-line method. A description of this method and arguments for and against its use are outlined in Volume I, Chapter XXIX, § 7, and in Volume IV, Chapter XII, § 7.

Problem 10

An account with Reserve for Depreciation of Delivery Equipment showed on December 31, 1919, a balance of $940.80. The Delivery Equipment account of the same date showed a balance of $13,968.40.

In August, 1919, a horse died which cost $300, no entry being made at the time. Three years' depreciation had already been provided for at the time of the horse's death at the rate of 10% per annum, based on cost.

In October, 1919, a horse which cost $275 was sold for $175, the difference between cost and selling price having been charged to the reserve account. This horse was bought at the same time the other one was and the same depreciation has been provided for.

Make necessary adjustments.

Solution to Problem 10

Reserve for Depreciation of Delivery Equipment	$ 90.00	
Surplus	210.00	
Delivery Equipment		$300.00
To adjust loss caused by death of a horse: cost $300; depreciation 10% for three years $90.		

Surplus	17.50	
Reserve for Depreciation of Delivery Equipment		17.50
To correct a previous entry charging $100 to reserve when only $82.50 had been reserved. Cost of horse $275; sold for $175; three years' depreciation at 10% $82.50.		

Points Illustrated in Problem 10

(a) Replacements and Retirements. The accounting procedure for recording replacements and retirements is discussed in Volume I, Chapter XXIX, §§ 4 and 5.

(b) Surplus Adjustment. The necessity for recording any surplus adjustments applicable to prior fiscal periods is discussed in Volume IV, Chapter VII, § 4.

(c) Straight-Line Depreciation. Depreciation in this problem has been calculated on the straight-line method. This method is discussed in Volume I, Chapter XXIX, § 7, and Volume IV, Chapter XII, § 7.

Problem 11

December 31, 1918, at the time of closing the books, the Henry Hudson Company set aside 1½% of accounts receivable as a reserve for bad debts. The accounts receivable on that date showed a balance of $62,747.93.

June 30, 1919, the accounts of R. W. Rollins and Company for $137.20 and of J. C. Cutter for $42.25 are written off, as repeated attempts have been made to collect them.

September 1, 1919, a final dividend of 20% from trustees in bankruptcy for Thomas Knight on a claim of

$638.20 was received. Previous to this, dividends of 30% and 20% had been received.

July 2, 1920, J. C. Cutter paid us in full the amount written off on June 30, 1919.

Make necessary entries.

Solution to Problem 11

Profit and Loss		$941.22	
Reserve for Bad Debts			$941.22
1½% of accounts receivable ($62,747.93) set aside as a reserve for bad debts.			
Reserve for Bad Debts		179.45	
Accounts Receivable			179.45
Accounts written off as worthless:			
R. W. Rollins & Co.	$137.20		
J. C. Cutter	42.25		
Cash		127.64	
Reserve for Bad Debts		191.46	
Accounts Receivable			319.10
Final dividend of 20% from trustees of Thomas Knight—claim $638.20, previous dividends, 30% and 20%. Balance 30% charged off.			
J. C. Cutter		42.25	
Surplus			42.25
Cutter pays amount previously written off; above entry is to reopen his account.			
Cash		42.25	
J. C. Cutter			42.25
Received of J. C. Cutter amount previously written off as uncollectible.			

Points Illustrated in Problem 11

(a) Provision for Bad Debts. In this problem the provision for bad debts was based on the amount of accounts receivable outstanding. It is more customary to base this provision on the volume of sales. This matter is discussed in Volume I, Chapter XXIX, § 11.

(b) Charging Off Accounts. The procedure involved in charging uncollectible accounts against the reserve for bad debts is covered in Volume I, Chapter XXIX, § 11.

(c) Collection of Accounts Previously Written Off. The bookkeeping required upon the collection of an account previously written off as uncollectible is described in Volume IV, Chapter VII, § 4.

Problem 12

French and Dysart, Inc., are engaged in the manufacture of lathes. At the time of closing the books June 30, 1920, the following facts are discovered by the accountant:

March 1, the Essex Machine Company ordered the delivery of two lathes, which had been manufactured for them and had been held for shipping instructions since September, 1919. The lathes had been charged to the Essex Machine Company on September 21, 1919, but by an oversight were included in the inventory taken December 31. One machine was billed at $962.50 and the other at $750.

The inventory taken December 31 was also found to contain the following clerical errors: finished stock, $3,100 too much; raw materials, $1,000 too little.

L. P. Fuller, a customer of the company, failed and his affairs were settled in the bankruptcy court. A final dividend was received March 1, 1919, leaving an unpaid balance of $610 which was charged off to Profit and Loss. Fuller began business anew and desiring to make settlement in full with all creditors as he is able to do so, sends the company his check for $300 on account on June 30, 1920. What entry should the bookkeeper make?

If the $610 had been charged to a Reserve for Doubtful Accounts, what entry would you advise at the time of recovering the $300?

Solution to Problem 12

ADJUSTMENTS

June 30, 1920

Surplus	$1,712.50	
Inventory		$1,712.50
To adjust error in including two lathes billed to the Essex Machine Company in the inventory of December 31, 1919.		
Surplus	2,100.00	
Inventory		2,100.00
To adjust clerical errors in figuring inventory of December 31, 1919:		
Finished stock .... $3,100 too much		
Raw materials .... 1,000 too little		
$2,100 net error		
Accounts Receivable	610.00	
Surplus		610.00
To bring on balance of claim against L. P. Fuller (charged off March 1, 1919) who desires to make a settlement.		
Cash	300.00	
Accounts Receivable		300.00
L. P. Fuller on account.		

If the $610 had been charged off against a reserve the entries would be as follows:

Accounts Receivable	$ 610.00	
Reserve for Bad Debts		$ 610.00
Cash	300.00	
Accounts Receivable		300.00

Points Illustrated in Problem 12

(a) Surplus Adjustment. In Volume IV, Chapter VII, § 4, will be found a discussion of the adjustments of surplus or other similar account required upon the entry of items affecting prior fiscal periods.

(b) Collection of Account Charged Off. The adjustment necessary when an account previously charged off has been collected is discussed in Volume IV, Chapter VII, § 4.

Problem 13

The following facts are recorded in a Merchandise account in A's ledger:

Sales	$45,000.00
Purchases	30,000.00
Freight and Cartage (on sales $500, on purchases $500)	1,000.00
Returns by Us	2,500.00
Cash Discounts Allowed Customers	6,750.00
Cash Discounts Taken by A	750.00
Allowances to Customers	1,000.00
Inventory at the close of the year is valued at	5,000.00

(a) Set up the Merchandise account as it now stands in A's ledger, after which make journal entry or entries which will close the old Merchandise account and open such new accounts as you think necessary to show a complete classification of the trading activities of A.

(b) Submit a statement showing the profit on merchandise sales.

(c) Make entries for closing all the accounts into a Trading account.

(*Wisconsin C. P. A. Examination.*)

Solution to Problem 13

Merchandise

Purchases	$30,000.00	Sales	$45,000.00
Freight and Cartage In	500.00	Purchase Returns	2,500.00
Freight and Cartage Out	500.00	Cash Discounts on Purchases	750.00
Cash Discounts on Sales	6,750.00		
Sales Allowances	1,000.00		

Purchases	$30,000.00	
Freight and Cartage In	500.00	
Freight and Cartage Out	500.00	
Cash Discounts on Sales	6,750.00	
Sales Returns and Allowances	1,000.00	
Merchandise	9,500.00	
Sales		$45,000.00
Purchase Returns and Allowances		2,500.00
Cash Discounts on Purchases		750.00

The above entry is to close out the Merchandise account and to set up instead separate accounts showing the various trading activities.

STATEMENT OF PROFIT

Sales:		
Gross Sales	$45,000.00	
Deduct—Returns and Allowances	1,000.00	
Net Sales		$44,000.00
Cost of Goods Sold:		
Purchases (including opening inventory, if any)	$30,000.00	
Add—Freight and Cartage In	500.00	
Total Cost of Purchases	$30,500.00	

Deduct—Returns and Allowances	2,500.00	
Net Purchases	$28,000.00	
Deduct—Inventory at close of year	5,000.00	
Cost of Goods Sold		23,000.00
Gross Profit on Sales		$21,000.00

JOURNAL ENTRIES

Sales	$ 1,000.00	
Sales Returns and Allowances		$ 1,000.00
To show net sales in Sales account.		
Purchases	500.00	
Freight and Cartage In		500.00
To show total cost of purchases in Purchases account.		
Purchase Returns and Allowances	2,500.00	
Purchases		2,500.00
To show net purchases in Purchases account.		
Sales	44,000.00	
Trading Account		44,000.00
Trading Account	28,000.00	
Purchases		28,000.00
To transfer balances of Sales and Purchases accounts.		
Merchandise Inventory	5,000.00	
Trading Account		5,000.00
To record inventory at close of year.		

Points Illustrated in Problem 13

(a) Interpretation of Problem. The problem requires the closing of "all the accounts into a Trading account." In view of the fact that some of the accounts listed do not properly belong in a Trading account, it is assumed that the problem requires the closing of only those accounts that do belong in a Trading account. Any other interpretation would reduce the problem to a simple exercise in journalization. Accordingly, some of the items are not closed into the Trading account in the solution given.

(b) Inadequate Merchandise Account. This problem illustrates the old-fashioned type of Merchandise account which contains all the elements from which the gross profit is determined. Such an account is inadequate, for reasons explained in Volume I, Chapter VIII, § 3.

(c) Separate Accounts for Sales and Purchases. The desirability of having a separate account for each element from which the gross profit is determined is explained in Volume I, Chapter VI, § 13.

(d) Determination of Gross Profit. The method of calculating gross profit as exemplified in this solution is described in Volume I, Chapter VIII, § 4.

(e) Cash Discounts. Cash discounts form no part of the trading income or expense, in accordance with principles explained in Volume I, Chapter XXV, § 8.

(f) Freight and Cartage Inward. This is an addition to the cost of purchases, as described in Volume I, Chapter IX, § 8.

(g) Freight and Cartage Outward. This item does not appear in the Trading account because it is not an expense to be considered in determining the gross profit. For a discussion of it see Volume I, Chapter IX, § 7.

(h) Bookkeeping to Facilitate Statement Preparation. The accounts are stated in this solution in a way to facilitate the preparation of financial statements. The desirability of this is pointed out in Volume I, Chapter VI, § 9.

(i) Account for Merchandise Inventory. A separate account is opened for the merchandise inventory, as suggested in Volume I, Chapter VIII, § 4. This account may be kept on the ledger during the next fiscal period, being closed into Merchandise Purchases or into Trading account at the end of the period; or it may be closed into Purchases at the beginning of the next fiscal period. Instead of opening a separate account for merchandise inventory, the amount of the inventory may be brought down as a balance of the Purchases account. The journal entry to effect this would be Purchases (new account) to Purchases (old account).

(j) Closing Entries. The preparation of closing entries in the journal is described in Volume I, Chapter VIII, § 7.

(k) Trading Account. The purpose of a Trading account is to show the gross profit on the books. This account is a subdivision of the Profit and Loss account, to which its balance is transferred.

Problem 14

A, B, and C agree to start in business with a capital of $200,000, of which A is to furnish $100,000 and B and C $50,000 each. A is to have ½ interest in the business and B and C each ¼. Interest at 5% is to be credited on excess, or charged on deficiency of capital. A contributes $100,000, B $45,000, and C $40,000. How would the capital accounts stand on the books after adjusting the interest at the end of the year?

(*New York C. P. A. Examination.*)

Solution to Problem 14

First Solution

B is charged interest on his deficiency of $5,000, resulting in a debit of $250 to his account and a credit to Profit and Loss.

C is charged interest on his deficiency of $10,000, resulting in a debit of $500 to his account and a credit to Profit and Loss.

The total credit to Profit and Loss is divided, A $\frac{1}{2}$; B and C $\frac{1}{4}$ each, leaving A with a credit of $100,375; B $44,937.50; C $39,687.50.

Second Solution

The total capital contributed is $185,000; had this been contributed in such proportion as to give A a $\frac{1}{2}$ interest, B $\frac{1}{4}$, and C $\frac{1}{4}$, the investments of each would have been: A $92,500; B $46,250; and C $46,250. Instead, A contributed $7,500 more than his share; B $1,250 less, and C $6,250 less. Crediting A with interest on this excess and charging B and C with interest on their deficiencies, we arrive at the results shown in the solution above.

Points Illustrated in Problem 14

(a) Division of Profits. As pointed out in Volume I, Chapter XXXI, § 6, any basis for the division of profits may be adopted by the partners. In this problem a percentage basis was adopted which was to prevail regardless of the capital contributions.

(b) Interest on Capital. The expedient for compensating a partner for a capital contribution in excess of that by another partner by means of allowing interest on capital is discussed in Volume I, Chapter XXXI, § 9.

Problem 15

D. E. Draper and H. M. Monroe are partners in a wholesale dry goods business. Among other things, the partnership agreement states that 5% interest is to be allowed each partner on his investment and 6% charged on all drawings in excess of salary allowances, after which the net profit is to be divided as follows: Draper, two-thirds; Monroe, one-third.

On January 1, 1920, Draper's capital account showed a credit of $18,512.60, and Monroe's a credit of $12,678.52. During the year their drawings in excess of salary were as follows:

Draper		Monroe	
February 23	$ 600.00	January 25	$1,000.00
May 26	1,000.00	March 1	500.00
October 15	900.00	September 1	2,000.00

(a) Make entries to give effect to the interest clause of the agreement and to show the distribution of the remaining profit.

(b) Which partner would lose in this case, in the absence of an interest clause?

Solution to Problem 15

(a)

Interest on Capital		$1,559.56	
D. E. Draper, Capital Account			$925.63
H. M. Monroe, Capital Account			633.93
Interest on capital for one year at 5%.			
D. E. Draper, Capital Account		78.03	
Interest on Capital			78.03
Interest on drawings at 6% as follows:			
$ 600 for 10 mos. 8 days	$30.80		
1,000 " 7 " 5 "	35.83		
900 " 2 " 16 "	11.40		
	$78.03		

H. M. Monroe, Current Account		121.00	
Interest on Capital			121.00
Interest on drawings at 6% as follows:			
$1,000 for 11 mos. 6 days	$ 56.00		
500 " 9 " 30 "	25.00		
2,000 " 3 " 30 "	40.00		
	$121.00		

The balance of the Interest on Capital account as brought on the books by the above entries is $1,360.53, of which Draper is charged with two-thirds and Monroe with one-third. The net result is a debit in Draper's account and a credit in Monroe's, amounting to $59.42. The analysis of each account, so far as the interest entries are concerned, follows:

DRAPER, CAPITAL ACCOUNT

Debits:		
Interest on Drawings	$ 78.03	
Two-thirds of debit balance of Interest Account	907.02	
Total		$985.05
Credit:		
Interest on Capital		925.63
Net debit		$ 59.42

MONROE, CAPITAL ACCOUNT

Credit:		
Interest on Capital		$633.93
Debits:		
Interest on Drawings	$121.00	
One-third of debit balance of Interest Account	453.51	
Total		574.51
Net credit		$ 59.42

(b)

Monroe would have suffered if the agreement had contained no interest clause, because his investment is more than one-third of the total capital, whereas he is entitled to only one-third of the profits.

Points Illustrated in Problem 15

(a) Interest on Capital. The nature of interest on capital and the correct methods of recording it are outlined in Volume I, Chapter XXXI, §§ 9–11.

(b) Interest on Drawings. The connection between interest on capital and interest on drawings is pointed out in Volume I, Chapter XXXI, § 10. As this matter is commonly misunderstood, it is suggested that this reference be examined with considerable care.

Problem 16

A and B form a partnership, A investing $30,000 and B $50,000. They agree to share profits and losses equally. They further agree to and do leave their original investments intact. At the end of the first year, the profits from the operation of the business amount to $30,000, against which A has drawn in twelve equal monthly instalments on the last day of each month an aggregate amount of $9,000; B has drawn against his profits on the last day of each quarter the total sum of $2,500.

Prepare journal entries adjusting interest at 5% per annum in respect to both investments and drawings;

and render statements showing what each partner has in the business at the end of the year.

Solution to Problem 16

Interest on Capital	$4,000.00	
A, Capital		$1,500.00
B, Capital		2,500.00
To credit each partner with interest on his capital at 5%.		
A, Capital	206.25	
Interest on Capital		206.25
To charge A with interest on drawings at 5% as follows: Drawings of $9,000 for the year on the last day of each month amount to a monthly drawing of $750; the first drawing would be charged interest for 11 months, the second, 10 months, etc., making an interest charge on $750 for a total of 66 months or 5½ years, or $206.25.		
B, Capital	187.50	
Interest on Capital		187.50
As B drew $2,500 on the last day of each quarter, he would be charged interest on the first drawing for 9 months, on the second for 6 months, on the third for 3 months, making a total of 18 months' interest charge on $2,500 at 5%, or $187.50.		

The account with Interest on Capital would be closed into Profit and Loss, reducing the balance of such account to $26,393.75, which would be closed out by the following entry:

Profit and Loss	$26,393.75	
A, Capital		$13,196.87
B, Capital		13,196.88

The following statements show each partner's interest in the business at the end of the year.

A

Investment		$30,000.00	
Less—Drawings		9,000.00	
Net Investment			$21,000.00
Add:			
Interest on Capital	$ 1,500.00		
One-half Net Profit	13,196.87	$14,696.87	
Less—Interest on Drawings		206.25	14,490.62
Net Capital, December 31			$35,490.62

B

Investment		$50,000.00	
Less—Drawings		10,000.00	
Net Investment			$40,000.00
Add:			
Interest on Capital	$ 2,500.00		
One-half Net Profit	13,196.88	$15,696.88	
Less—Interest on Drawings		187.50	15,509.38
Net Capital, December 31			$55,509.38

Points Illustrated in Problem 16

(a) Basis of Profit Distribution. In this problem profits and losses are shared equally by agreement between the partners. The various bases upon which profits are usually divided and the law which governs in case no provision is made are discussed in Volume I, Chapter XXXI, §§ 6 and 7.

(b) Interest on Capital. The net effect of the interest on capital in this problem was to increase B's capital by $509.38, with a corresponding reduction in A's capital. This provides extra compensation to B for his excess capital contribution. This matter is discussed in Volume I, Chapter XXXI, § 11.

Problem 17

Wilson and Lawson are partners, sharing profits and losses equally. The partnership is dissolved December 31, 1919, at which time Wilson's capital investment was $10,000, and Lawson's $2,500. The total liabilities of the firm are $25,000 which includes $5,000 due Wilson on loan account and $2,500 due Lawson on loan account. The assets of the firm are disposed of for $30,000 on May 1, 1920. Prepare accounts closing the partnership and showing the position in which the partners stand to each other. No allowance for interest is required.

Solution to Problem 17

BALANCE SHEET OF WILSON AND LAWSON

December 31, 1919

Cash	$30,000.00	Wilson Capital	$10,000.00
Profit and Loss	7,500.00	Lawson Capital	2,500.00
		Trade Creditors	17,500.00
		Wilson's Loan Account	5,000.00
		Lawson's Loan Account	2,500.00
	$37,500.00		$37,500.00

The net loss of $7,500 is divided equally between Wilson and Lawson, leaving Wilson's account with a credit of $6,250, and Lawson's account with a debit of $1,250.

The amount due outside creditors is paid, after which Wilson's loan of $5,000 is paid, leaving a cash balance of $7,500. Inasmuch as Lawson's capital account has been overdrawn $1,250, Wilson should insist that $1,250 of the amount due Lawson on his loan should be withheld to cancel his deficit. Wilson would take $6,250 of the remaining cash balance, and Lawson, $1,250, closing all the accounts.

Points Illustrated in Problem 17

(a) Distribution of Loss. The loss in this case was distributed between partners on their profit and loss sharing basis. This is in accordance with principles explained in Volume I, Chapter XXXII, § 6.
(b) Distribution of Assets. The asset cash was distributed between partners in the amounts called for by their capital accounts. The reason for this is stated in Volume I, Chapter XXXII, § 6.
(c) Offsetting Loan with Deficit. As explained in Volume I, Chapter XXXII, § 9, the deficit in one partner's account should be offset by his credit for loans.

Problem 18

Brown, Smith, and Jones are partners sharing profits and losses equally, their original investments being $20,000, $5,000, and $45,000 respectively. Upon agreement to dissolve partnership, the debts are liquidated and the remaining assets converted into cash, realizing $22,000. How should the cash be divided?

Solution to Problem 18

Setting up a balance sheet, will give us the following:

BALANCE SHEET OF BROWN, SMITH, AND JONES

Cash	$22,000.00	Brown	$20,000.00
Deficit	48,000.00	Smith	5,000.00
		Jones	45,000.00
	$70,000.00		$70,000.00

Dividing the deficit of $48,000 equally leaves Brown's account with a credit of $4,000, Smith's with a debit of $11,000, and Jones' with a credit of $29,000.

Brown and Jones thus have a claim against Smith for $11,000, which when paid increases the cash to $33,000, this being shared by Brown and Jones in accordance with their capital interests: Brown $4,000; Jones $29,000.

If the claim against Smith is uncollectible, there would be a loss of $11,000 to be borne equally by Brown and Jones, leaving Brown's capital account with a debit of $1,500, and Jones' with a credit balance of $23,500. Jones would then take the cash of $22,000 and have a claim against Brown for $1,500.

Points Illustrated in Problem 18

(a) Distribution of Deficit and of Assets. As explained in Volume I, Chapter XXXII, § 6, the deficit should be distributed on the profit and loss sharing basis, whereas the cash should be divided according to the amounts called for by the capital accounts.

(b) Loss on Partner's Account. Where one partner has a debit balance which is uncollectible by the other partners, the latter share this loss in the ratio of their profit and loss sharing percentages. This matter is discussed in Volume I, Chapter XXXII, § 9. In this connection the partnership law (Chapter XXXIX of the Consolidated Laws), passed in New York State on May 5, 1919, provides in Section 71, "If any, but not all, of the partners are insolvent, or, not being subject to process, refuse to contribute, the other partners shall contribute their share of the liabilities, and, in the relative proportions in which they share the profits, the additional amount necessary to pay the liabilities."

Problem 19

If the liquidation of a partnership consumes some time, it may be desired, in settlement, to pay off the partners in instalments as the assets are converted into cash.

To illustrate the procedure in such a case, we will consider the case of a partnership consisting of R, G, and L, each with a credit to his capital account of $20,000. Profits and losses are divided, 50% to R, 30% to G, and 20% to L. The firm suffers a loss of $10,000, leaving assets of $50,000. The partners proceed to convert the assets into cash and later have cash to the amount of $20,000 to distribute.

(a) How should the first instalment be divided?

(b) The next instalment for distribution is $16,000 and the final instalment is $12,000. How should each of the last two instalments be divided?

Solution to Problem 19

(a) Dividing the loss of $10,000 among R, G, and L in the proportions stated above, leaves R with a capital balance of $15,000, G with $17,000, and L with $18,000.

To make an equitable division of the first instalment, we should treat the unliquidated assets as a potential loss to be divided in proper proportions. This potential loss amounts to $30,000, the partners' shares being $15,000, $9,000, and $6,000 respectively. This leaves the capital accounts as follows: R none; G $8,000; L $12,000. On the first instalment, R therefore would receive nothing, G would receive $8,000, and L $12,000. R would then have a capital of $15,000, G $9,000, and L $6,000, which accounts now stand in the same ratio as that by which profits and losses are shared in accordance with the contract.

(b) The second instalment of $16,000 would be shared in the proportion of 50, 30, and 20, R receiving $8,000, G $4,800, and L $3,200. The capital accounts would then show R $7,000, G $4,200, and L $2,800, or a total of $14,000.

As the final instalment is only $12,000, a loss of $2,000 in liquidation has been sustained, which prorated leaves R with a capital of $6,000, G $3,600, and L $2,400. This is the basis on which the $12,000 would be divided.

Points Illustrated in Problem 19

(a) Preventing Overpayment of Partner. The principal point in this problem concerns the method of distributing assets in partial payments upon dissolution of a firm in such a way as to prevent the overpayment of any one partner. This very important matter is fully discussed in Volume I, Chapter XXXII, § 8.

Problem 20

Three partners contribute capital as follows: X \$90,000, Y \$45,000, Z \$15,000. They share profits in the proportion of X 50%, Y 30%, and Z 20%. X's salary is \$5,000, Y's salary is \$3,000, Z's salary is \$2,000. At the end of their fiscal period Z dies. The books are closed and the net assets ascertained to be \$152,500. X and Y liquidate the firm's affairs and distribute the surplus assets quarterly as follows:

First quarter	\$42,410.20	
Second quarter	74,622.30	
Third quarter	31,967.50	\$149,000.00

Prepare a statement of the partners' accounts, showing how the distribution of assets should be made, together with the apportionment of the loss.

(New York C.P.A. Examination.)

Solution to Problem 20

Capital contributed	\$150,000.00
Salary credited to partners	10,000.00
Accountability to partners	160,000.00

As there are net assets of only \$152,500, there is a loss of \$7,500 to be distributed: \$3,750 to X, \$2,250 to Y, \$1,500 to Z.

The assets are distributed in cash instalments as they are liquidated. In such a case, the basis of distribution must anticipate any shrinkage in assets in order that no partner shall be overpaid. The method is as follows:

When the first instalment is ready for distribution, treat the remaining assets as a potential loss, and see what balances would remain to the credit of each partner if such a loss were to be divided in the proportion agreed upon. The credit balances resulting in such a case would be the basis for distribution of the first instalment.

Proceeding in accordance with the method outlined we find that if the first instalment of $42,410.20 was all that would ever be realized from the assets, there would be a shrinkage of $110,089.80, which divided would show X's share to be $55,044.90, Y's $33,026.94, Z's $22,017.96. If these were charged against the partners, the resulting balances to the accounts would be: X, credit, $36,205.10; Y, credit, $12,723.06; and Z, debit, $6,517.96.

Therefore, Z's debit must be treated as an additional potential loss to be borne by X and Y in the proportion of 5/8 and 3/8, X's share being $4,073.73 and Y's $2,444.23. Deducting these losses from the balances above, gives X a credit balance of $32,131.37 and Y $10,278.83, the basis for the division of the first instalment.

This does not yet leave the accounts standing in the ratio of 50, 30, and 20, Z's account being proportionately less; since the purpose is to establish the above ratio as soon as possible, the second instalment is treated the same as the first. After it is ready for distribution the remaining assets of $35,467.50 are treated as a potential loss shared, X $17,733.75, Y $10,640.25, and Z $7,093.50, leaving X a credit balance of $41,384.88, Y $24,830.92, and Z $8,406.50, which is the basis for distribution of second instalment.

The accounts of X, Y, and Z now show credit balances in the ratio of 50, 30, and 20, the same as the basis for sharing of profits. The third instalment is distributed in this proportion. As nothing then remains, there is a final loss in liquidation of $3,500, which is borne in the agreed ratio and in accordance with the capital accounts as they then stand.

Following are skeleton ledger accounts with each partner.

X

50% Net Loss	$ 3,750.00	Investment	$90,000.00
First Instalment	32,131.37	Salary	5,000.00
Second "	41,384.88		
Third " (50%).	15,983.75		
50% Net Loss	1,750.00		
	$95,000.00		$95,000.00

Y

30% Net Loss	$ 2,250.00	Investment	$45,000.00
First Instalment	10,278.83	Salary	3,000.00
Second "	24,830.92		
Third " (30%).	9,590.25		
30% Net Loss	1,050.00		
	$48,000.00		$48,000.00

Z

20% Net Loss	$ 1,500.00	Investment	$15,000.00
Second Instalment	8,406.50	Salary	2,000.00
Third " (20%).	6,393.50		
20% Net Loss	700.00		
	$17,000.00		$17,000.00

Points Illustrated in Problem 20

(a) Prevention of Overpayment. The point in regard to the prevention of overpayment of a partner upon dissolution is a very practical one which is likely to arise in almost every partnership dissolution. It is discussed and explained in Volume I, Chapter XXXII, § 8.

Problem 21

A, B, and C engage in business, A contributing $10,000 and B $5,000, while C, in lieu of any capital contribution, agrees to undertake the active management at a salary of $3,000 per year, to be paid monthly.

After allowing 5% interest on capital, they are to divide the net result in the proportions of 5, 3, and 2 respectively.

At the end of eighteen months they ascertain the position to be unfavorable and decide to wind up. The assets realize $12,500; there are no liabilities except for capital and interest thereon and one month's salary due C.

Make up the partners' accounts, showing the amount to be received by each.

(*Massachusetts C. P. A. Examination.*)

Solution to Problem 21

UNADJUSTED BALANCE SHEET OF A, B, AND C AT DISSOLUTION

Cash	$12,500.00	A, Capital	$10,000.00
Profit and Loss	2,750.00	B, Capital	5,000.00
		C, Salary Account	250.00
	$15,250.00		$15,250.00

Profit and Loss

Loss on Realization	$2,750.00	A, ½ Net Loss	$1,937.50
Interest on Capital	1,125.00	B, 3/10 Net Loss	1,162.50
		C, 2/10 Net Loss	775.00
	$3,875.00		$3,875.00

Interest on Capital

Interest on A's Capital ..	$ 750.00	Profit and Loss	$1,125.00
Interest on B's Capital ..	375.00		
	$1,125.00		$1,125.00

A—Capital

½ Net Loss	$ 1,937.50	Investment	$10,000.00
Balance	8,812.50	Interest	750.00
	$10,750.00		$10,750.00
		Balance	$ 8,812.50

B—Capital

3/10 Net Loss	$1,162.50	Investment	$5,000.00
Balance	4,212.50	Interest	375.00
	$5,375.00		$5,375.00
		Balance	$4,212.50

C—Salary Account

2/10 Net Loss	$775.00	Salary due	$250.00
		Balance	525.00
	$775.00		$775.00
Balance	$525.00		

After crediting interest on capital and distributing the net loss, A's capital account shows a credit of

$8,812.50; B's a credit of $4,212,50; and C's a debit of $525. A and B should insist that the $250 salary due A be treated as a set-off against the debit balance in his account. This being the case, his remaining balance of $525 could be regarded as a potential loss to be shared by A and B in the proportion in which they share losses, the $12,500 cash then being divided between them in accordance with their adjusted capital accounts. If the claim of $525 against C could be collected, there would be $13,025 in cash with which to pay off the amounts due A and B.

Points Illustrated in Problem 21

(a) Interest on Capital. The nature of interest on capital and the accounting means by which it is recorded are described in Volume I, Chapter XXXI, § 10.

(b) Distribution of Loss and of Assets. As explained in Volume I, Chapter XXXII, § 6, the loss is distributed on the profit and loss sharing basis, whereas the cash is divided in accordance with the capital accounts after they have been adjusted.

(c) Loss on Partner's Account. The distribution of such a loss among solvent partners is discussed in Volume I, Chapter XXXII, § 9. This point is covered also by the New York Partnership Law which is quoted in the points illustrated for Problem 18 to which reference should be made.

(d) Salary of Partner. As explained in Volume I, Chapter XXXI, § 12, there can be, strictly speaking, no salary for any partner. The so-called salaries of partners which are chargeable against profits before the determination of the net amount divisible are discussed and explained in this reference. The New York Partnership Law passed May 5, 1919 (Chapter XXXIX of the Consolidated Laws) provides in Section 40: "No partner is entitled to remuneration for acting in the partnership business." This, however, does not prevent the allowance of the so-called salaries in the way explained in Volume I, Chapter XXXI, § 12.

Problem 22

JONES AND ROSS

TRIAL BALANCE

June 30, 1920

Land (cost)	$ 55,000.00	
Building (cost)	37,500.00	
Furniture and Fixtures (cost)	5,820.00	
Cash	7,682.53	
Accounts Receivable	23,731.40	
Notes Receivable	730.00	
Inventory, December 31, 1919 (cost)	24,260.75	
Mortgage Payable		$ 35,000.00
Accounts Payable		9,840.62
Notes Payable		5,000.00
C. R. Ross, Salary		250.00
Reserve for Depreciation of Building		7,500.00
Reserve for Depreciation of Furniture and Fixtures		1,750.00
Reserve for Loss on Bad Accounts and Notes Receivable		169.80
H. B. Jones, Capital		60,000.00
H. B. Jones, Drawings	1,869.00	
C. R. Ross, Capital		30,000.00
C. R. Ross, Drawings	4,705.00	
Sales		82,687.19
Purchases	53,321.60	
Freight, Express, and Cartage Inward	1,924.34	
Traveling Expenses	2,107.40	
Salaries and Wages	9,369.72	
Delivery Expenses	1,290.81	
Office Expenses	1,587.10	

Insurance	435.00	
Interest on Notes Receivable		136.24
Interest on Notes Payable	238.90	
Interest on Mortgage Payable	875.00	
Cash Discounts on Purchases		486.72
Cash Discounts on Sales	372.02	
	$232,820.57	$232,820.57

Cost of merchandise on hand June 30, 1920, $25,710.40.

The firm of Jones and Ross conducts a wholesale and retail hardware business, owning its own real estate.

By the terms of the partnership agreement, profits and losses are shared two-thirds by Mr. Jones and one-third by Mr. Ross: Mr. Ross who acts as general manager, is allowed a salary of $250 a month, which is considered as an expense of operating the business; profits not withdrawn by partners are not considered a part of their capital investments, but are credited to the partners' drawings accounts, and may be withdrawn by the partners at their convenience. On December 31, 1919, Mr. Jones' drawings account contained a credit balance of $3,629.40. Mr. Ross' drawings account had no balance.

The item of freight, express, and cartage inward on merchandise purchases is not considered a part of the cost of goods purchased. The stock is very varied, and to distribute properly the cost of freight and carting among the numerous commodities would be difficult and unsatisfactory.

During the six months ending June 30, 1920, the Sales account has been credited for $86,108.89 representing gross sales, and debited for $3,421.70 representing sales returns and allowances; the Purchases account has been debited for $57,529.46 gross purchases, and credited for $4,207.86 purchase returns and allowances.

In order that the results of the period may be correctly shown, the following items require adjustment:

Unexpired insurance as of June 30	$260.00
Taxes accrued to June 30	102.50
Interest accrued on interest-bearing notes receivable to June 30	24.60
Interest accrued on interest-bearing notes payable to June 30	75.00
Office supplies on hand which cost	150.89

Depreciation on the building is figured at the rate of 2% per annum; on the furniture and fixtures, at 10% per annum. It is desired to set aside out of the profits for the period a further reserve for loss on bad accounts and notes receivable amounting to ½% of the net sales.

Required:

(a) Adjusting entries
(b) Working sheet
(c) Profit and loss statement
(d) Balance sheet
(e) Closing entries

Solution to Problem 22

(a)

JONES AND ROSS

ADJUSTING ENTRIES

June 30, 1920

Unexpired Insurance	$260.00	
Insurance		$260.00
To bring onto the books the unexpired insurance as of this date.		

Taxes		102.50	
Taxes Accrued			102.50
To bring onto the books the taxes accrued to date.			
Accrued Interest on Notes Receivable		24.60	
Interest on Notes Receivable			24.60
To bring onto the books the interest accrued to date on interest-bearing notes receivable:			
J. A. Shore's note of October 15, 1919, $500, 8 months, 15 days, at 6%	$21.25		
R. C. Cram's note of April 3, 1920, $230, 2 months, 27 days, at 6%	3.35		
Interest on Notes Payable		75.00	
Interest Accrued on Notes Payable			75.00
To bring onto the books the interest accrued to date on interest-bearing notes payable:			
Note of April 1, 1920, favor First National Bank, $5,000, 90 days at 6%.			
Office Supplies on Hand		150.89	
Office Expenses			150.89
To bring onto the books the cost of office supplies on hand as of this date.			
Depreciation of Building		375.00	
Reserve for Depreciation of Building			375.00
Estimated depreciation on the building for the six months ending June 30, 1920. Figured on cost ($37,500) at the rate of 2% per annum.			
Depreciation of Furniture and Fixtures		291.00	
Reserve for Depreciation of Furniture and Fixtures			291.00
Estimated depreciation on furniture and fixtures for the six months ending June 30, 1920. Figured on cost ($5,820) at the rate of 10% per annum.			
Loss on Bad Accounts and Notes Receivable		413.44	
Reserve for Loss on Bad Accounts and Notes Receivable			413.44
To set aside from the profits of the period ½% of the net sales to provide for future losses on bad accounts and notes receivable.			

(For [b] see pages 50 and 51.)

(c)

JONES AND ROSS

TRADING AND PROFIT AND LOSS STATEMENT

For Six Months Ending June 30, 1920

Net Sales:				
Gross Sales			$86,108.89	
Less—Returns and Allowances			3,421.70	$82,687.19
Deduct—Cost of Sales:				
Goods on Hand January 1, 1920		$24,260.75		
Net Purchases:				
Gross Purchases	$57,529.46			
Less—Returns and Allowances	4,207.86	53,321.60	$77,582.35	
Less—Goods on Hand June 30, 1920			25,710.40	51,871.95
Gross Trading Profit				$30,815.24
Deduct—Operating Expenses:				
Freight, Express, and Cartage Inward			$ 1,924.34	
Traveling Expenses			2,107.40	
Salaries and Wages			9,369.72	
Delivery Expenses			1,290.81	
Office Expenses			1,436.21	
Taxes			102.50	
Insurance			175.00	
Depreciation of Buildings			375.00	
Depreciation of Furniture and Fixtures			291.00	17,071.98
Net Trading Profit				$13,743.26
Add—Extraneous Income Items:				
Interest on Notes Receivable			$ 160.84	
Cash Discounts on Purchases			486.72	647.56
Total Income				$14,390.82
Deduct—Extraneous Expense Items:				
Interest on Notes Payable			$ 313.90	
Interest on Mortgage Payable			875.00	
Cash Discounts on Sales			372.02	
Loss on Bad Debts and Accounts Receivable			413.44	1,974.36
Net Profit for Period:				
H. B. Jones—two-thirds			$ 8,277.64	
C. R. Ross—one-third			4,138.82	
				$12,416.46

4

(b)

JONES

WORKING

Six Months Period, January 1,

	Accounts	Trial Balance per Books		Adjustments	
		Debits	Credits	Debits	Credits
1	Land	$ 55,000.00			
2	Building	37,500.00			
3	Furniture and Fixtures	5,820.00			
4	Cash	7,682.53			
5	Accounts Receivable	23,731.40			
6	Notes Receivable	730.00			
7	Inventory	24,260.75			
8	Mortgage Payable		$ 35,000.00		
9	Accounts Payable		9,840.62		
10	Notes Payable		5,000.00		
11	C. R. Ross, Salary		250.00		
12	Reserve for Depreciation of Building		7,500.00		(6) $375.00
13	Reserve for Depreciation of Furn. and Fixtures		1,750.00		(7) 291.00
14	Reserve for Loss on Bad Accts. and Notes Rec.		169.80		(8) 413.44
15	H. B. Jones, Capital		60,000.00		
16	H. B. Jones, Drawings	1,869.00			
17	C. R. Ross, Capital		30,000.00		
18	C. R. Ross, Drawings	4,705.00			
19	Sales		82,687.10		
20	Purchases	53,321.60			
21	Freight, Express, and Cartage In	1,924.34			
22	Traveling Expenses	2,107.40			
23	Salaries and Wages	9,369.72			
24	Delivery Expenses	1,290.81			
25	Office Expenses	1,587.10			(5) 150.89
26	Insurance	435.00			(1) 260.00
27	Interest on Notes Receivable		136.24		(3) 24.60
28	Interest on Notes Payable	238.90		(4) $75.00	
29	Interest on Mortgage Payable	875.00			
30	Cash Discounts on Purchases		486.72		
31	Cash Discounts on Sales	372.02			
		$232,820.57	$232,820.57		
32	Unexpired Insurance			(1) 260.00	
33	Taxes			(2) 102.50	
34	Accrued Taxes				(2) 102.50
35	Accrued Interest on Notes Receivable			(3) 24.60	
36	Accrued Interest on Notes Payable				(4) 75.00
37	Office Supplies on Hand			(5) 150.89	
38	Depreciation of Building			(6) 375.00	
39	Depreciation of Furniture and Fixtures			(7) 291.00	
40	Loss on Bad Accounts and Notes Receivable			(8) 413.44	
				$1,692.43	$1,692.43

AND ROSS
SHEET
1920, to June 30, 1920

	Adjusted Trial Balance		Trading		Profit and Loss		Assets and Liabilities	
	Debits	Credits	Debits	Credits	Expenses	Income	Assets	Liabilities
1	$ 55,000.00						$ 55,000.00	
2	37,500.00						37,500.00	
3	5,820.00						5,820.00	
4	7,682.53						7,682.53	
5	23,731.40						23,731.40	
6	730.00						730.00	
7	24,260.75		$ 24,260.75	$ 25,710.40			25,710.40	
8		$ 35,000.00						$ 35,000.00
9		9,840.62						9,840.62
10		5,000.00						5,000.00
11		250.00						250.00
12		7,875.00						7,875.00
13		2,041.00						2,041.00
14		583.24						583.24
15		60,000.00						60,000.00
16	1,869.00						5,498.40	3,629.40
17		30,000.00						30,000.00
18	4,705.00						4,705.00	
19		82,687.19	3,421.70	86,108.89				
20	53,321.60		57,529.46	4,207.86				
21	1,924.34				$ 1,924.34			
22	2,107.40				2,107.40			
23	9,369.72				9,369.72			
24	1,290.81				1,290.81			
25	1,436.21				1,436.21			
26	175.00				175.00			
27		160.84				$ 160.84		
28	313.90				313.90			
29	875.00				875.00			
30		486.72				486.72		
31	372.02				372.02			
32	260.00						260.00	
33	102.50				102.50			
34		102.50						102.50
35	24.60						24.60	
36		75.00						75.00
37	150.89						150.89	
38	375.00				375.00			
39	291.00				291.00			
40	413.44				413.44			
	$234,102.11	$234,102.11						
	Gross Trading Profit		30,815.24			30,815.24		
			$116,027.15	$116,027.15				
				Net Profit	12,416.46		Jones	8,277.6
							Ross	4,138.82
					$31,462.80	$31,462.80	$166,813.22	$166,813.22

(d)

JONES AND ROSS

BALANCE SHEET

June 30, 1920

Assets

Fixed Assets:			
Land (cost)		$55,000.00	
Building (cost)	$37,500.00		
Less—Reserve for Depreciation	7,875.00	29,625.00	
Furniture and Fixtures (cost)	$ 5,820.00		
Less—Reserve for Depreciation	2,041.00	3,779.00	$ 88,404.00
Current Assets:			
Cash on Hand		$ 7,682.53	
Accounts Receivable	$23,731.40		
Notes Receivable	730.00		
	$24,461.40		
Less—Reserve for Bad Debts and Notes Receivable	583.24	23,878.16	
Accrued Interest on Notes Receivable		24.60	
Merchandise on Hand		25,710.40	57,295.69
Deferred Charges to Profit and Loss:			
Unexpired Insurance		$ 260.00	
Office Supplies on Hand		150.89	410.89
Total Assets			$146,110.58

Liabilities and Net Worth

Fixed Liabilities:		
Mortgage Payable		$ 35,000.00
Current Liabilities:		
Accounts Payable	$ 9,840.62	
Notes Payable	5,000.00	
Accrued Interest on Notes Payable	75.00	

Accrued Taxes		102.50	
Due C. R. Ross on Salary Account		250.00	15,268.12
Total Liabilities			$ 50,268.12
H. B. Jones' Net Worth:			
Capital Investment		$60,000.00	
Add:			
Profits Accumulated to January 1, 1920	$ 3,629.40		
Two-thirds Net Profit for six months ending June 30, 1920	8,277.64		
	$11,907.04		
Less—Drawings, January 1, 1920, to June 30, 1920	5,498.40	6,408.64	66,408.64
C. R. Ross' Net Worth:			
Capital Investment		$30,000.00	
Deduct—Drawings, January 1, 1920, to June 30, 1920	$ 4,705.00		
Less—One-third Net Profit for six months ending June 30, 1920	4,138.82	566.18	29,433.82
Total Liabilities and Net Worth			$146,110.58

(e)

JONES AND ROSS

CLOSING ENTRIES

June 30, 1920

Trading	$24,260.75	
Inventory		$24,260.75
Goods on hand January 1, 1920, per inventory.		
Trading	53,321.60	
Purchases		53,321.60
Net purchases for six months ending June 30, 1920.		
Sales	82,687.19	
Trading		82,687.19
Net sales for six months ending June 30, 1920.		

Inventory	25,710.40	
Trading		25,710.40
Goods on hand June 30, 1920, per inventory.		

Trading	30,815.24	
Profit and Loss		30,815.24
To transfer to Profit and Loss account the gross trading profit for the six months ending June 30, 1920, as represented by the balance of the Trading account.		

Interest on Notes Receivable	160.84	
Cash Discounts on Purchases	486.72	
Profit and Loss		647.56
To transfer to Profit and Loss account the balances of the accounts representing extraneous income for the six months ending June 30, 1920.		

Profit and Loss	17,071.98	
Freight, Express, and Cartage Inward		1,924.34
Traveling Expenses		2,107.40
Salaries and Wages		9,369.72
Delivery Expenses		1,290.81
Office Expenses		1,436.21
Taxes		102.50
Insurance		175.00
Depreciation of Building		375.00
Depreciation of Furniture and Fixtures		291.00
To transfer to Profit and Loss account the balances of the accounts representing operating expenses for the six months ending June 30, 1920.		

Profit and Loss	1,974.36	
Interest on Notes Payable		313.90
Interest on Mortgage Payable		875.00
Cash Discounts on Sales		372.02
Loss on Bad Accounts and Notes Receivable		413.44
To transfer to Profit and Loss account the balances of the accounts representing extraneous expenses for the six months ending June 30, 1920.		

Profit and Loss	12,416.46	
H. B. Jones, Drawings		8,277.64
C. R. Ross, Drawings		4,138.82
To transfer to the partners' drawings accounts the net profit for the six months ending June 30, 1920, in the proportion of two-thirds to H. B. Jones and one-third to C. R. Ross.		

Points Illustrated in Problem 22

(a) Deferred Debits. This problem illustrates the setting up of deferred charges for unexpired insurance and unused office supplies, in order to record accurately the true amount of expense applicable to the period. (See Volume IV, Chapter II, § 4.)

(b) Arrangement of Items in Balance Sheet. In the balance sheet in this solution the fixed assets and fixed liabilities are listed first. This arrangement is unusual except for a corporation. (See Volume I, Chapter XI, § 2.)

(c) Reserves for Depreciation. The reserves for depreciation and for bad debts are deducted from the assets to which they relate, in accordance with the principles outlined in Volume I, Chapter XXIX, § 11.

(d) Working Sheet. This problem illustrates the use of a working sheet to show clearly the relation between adjusting and closing entries. (See Volume I, Chapter VIII, § 2.) The adjusting entries are entered on the working sheet at the time that they are posted to the ledger, whereas the closing entries are prepared from the working sheet. In fact, the purpose of the working sheet is to facilitate the preparation of closing entries and to minimize the chances of bookkeeping errors.

(e) Post-Closing Trial Balance. This solution shows the difference between a trial balance after closing and a balance sheet. As explained in Volume I, Chapter XI, § 18, the only difference between these statements is in form and arrangement.

(f) Form of Balance Sheet. This balance sheet is printed (for convenience) with the section devoted to liabilities and net worth appearing below the section devoted to assets. There is no essential difference between this form and the more common one in which the assets section is printed to the left of the other. This balance sheet is not in what is known as the statement or report form. In that type of balance sheet the total of the liabilities is deducted from the total of the assets, leaving a balance to represent the capital in the business. As explained in Volume I, Chapter XI, § 2, the report or statement form is most convenient when the items in the balance sheet are not very numerous.

Problem 23

Smith, Jones and Company, a partnership conducting a wholesale business and sharing profits in proportion to investments, concludes to incorporate. The following balance sheet was prepared as of December 1, 1919, the day on which the corporation is to succeed to the business.

BALANCE SHEET

December 1, 1919

Cash	$ 5,000.00	Accounts Payable	$ 25,000.00
Accounts Receivable	30,000.00	Notes Payable	5,000.00
Inventory	120,000.00	Smith, Capital	60,000.00
Sundry Assets	25,000.00	Jones, Capital	60,000.00
		Clark, Capital	30,000.00
	$180,000.00		$180,000.00

They incorporate "The Smith-Jones Company" with an authorized capital stock of $175,000, all the stock to be issued to the three partners in exchange for their respective interests in the business.

Closing entries for the partnership books and opening entries for the corporation are required.

Solution to Problem 23

ENTRIES TO CLOSE PARTNERSHIP BOOKS

Good-Will	$ 25,000.00	
Smith, Capital		$ 10,000.00
Jones, Capital		10,000.00
Clark, Capital		5,000.00
To bring good-will on the partnership books, its value being determined by the excess of the capital stock to be issued to the partners over the net worth of their business as shown by the balance sheet prepared December 1. Good-Will is divided among them in the proportion in which they share profits.		
The Smith-Jones Company	205,000.00	
Cash		5,000.00
Accounts Receivable		30,000.00
Inventory		120,000.00
Sundry Assets		25,000.00
Good-Will		25,000.00
To record the transfer of assets taken over by The Smith-Jones Company.		
Accounts Payable	25,000.00	
Notes Payable	5,000.00	
The Smith-Jones Company		30,000.00
To record the transfer of liabilities assumed by The Smith-Jones Company.		
Capital Stock (The Smith-Jones Company)	175,000.00	
The Smith-Jones Company		175,000.00
To bring onto the books the 1,750 shares of stock received from The Smith-Jones Company in exchange for the partnership business.		

Smith, Capital	70,000.00	
Jones, Capital	70,000.00	
Clark, Capital	35,000.00	
Capital Stock		175,000.00
To show the issue to the individual partners of the capital stock of The Smith-Jones Company, thus closing all the accounts on partnership books.		

ENTRIES TO OPEN CORPORATION BOOKS

December 1, 1919

The Smith-Jones Company has been incorporated this day under the laws of the State of Massachusetts, with an authorized capital stock of $175,000, divided into 1,750 shares of the par value of $100 each.

Cash	$ 5,000.00	
Accounts Receivable	30,000.00	
Inventory	120,000.00	
Sundry Assets	25,000.00	
Good-Will	25,000.00	
Smith, Jones and Company		$205,000.00
To bring onto the books the assets acquired from Smith, Jones and Company.		
Smith, Jones and Company	30,000.00	
Accounts Payable		25,000.00
Notes Payable		5,000.00
To bring onto the books the liabilities of Smith, Jones and Company assumed by the corporation.		
Smith, Jones and Company	175,000.00	
Capital Stock		175,000.00
To show the issue to Smith, Jones and Company of 1,750 shares of stock in exchange for the business formerly conducted by them as a partnership.		

Points Illustrated in Problem 23

(a) Good-Will on Dissolution. As explained in Volume I, Chapter XXXII, § 10, a partnership upon its dissolution under circumstances such as those given in this problem may record a good-will upon its books. Such good-will constitutes a profit and is divisible among partners in the profit and loss sharing ratio.

(b) Closing Partnership Accounts. The customary procedure involved in closing the accounts of a partnership upon its dissolution is fully described in Volume I, Chapter XXXII, § 10.

(c) Opening Entry for Corporation. The entry required to open corporation books when good-will is purchased under conditions similar to those in this problem is discussed in Volume I, Chapter XXXIII, § 8.

Problem 24

Ralph H. Wilson, George D. Light, and Frank L. Spear organize the R. H. Wilson Company with an authorized capital stock of $50,000. The subscription books close June 1, all the stock having been subscribed for. The subscribers pay their subscriptions in cash July 1, and receive stock certificates covering their holdings.

Show by pro forma journal entries how the books would be opened.

Solution to Problem 24

June 1

Subscriptions Receivable	$50,000.00	
Capital Stock Subscribed		$50,000.00
The full authorized issue of stock of the R. H. Wilson Company has been subscribed for, subscriptions payable July 1.		

July 1

Cash	50,000.00	
Subscriptions Receivable		50,000.00
Cash received in payment of subscriptions.		
Capital Stock Subscribed	50,000.00	
Capital Stock		50,000.00
Stock certificates are issued to the stockholders.		

Points Illustrated in Problem 24

(a) Subscriptions to Capital Stock. In this problem the capital stock is not immediately issued for cash or other consideration but is subscribed for by various individuals. The bookkeeping necessary under these conditions is outlined in Volume I, Chapter XXXIII, § 6, and in Volume IV, Chapter XIV, § 4.

Problem 25

Following is the liabilities and capital section of the balance sheet of a corporation:

Capital Liabilities:		
Preferred Stock	$100,000.00	
Common Stock	500,000.00	
First Mortgage Bonds	100,000.00	$ 700,000.00
Current Liabilities:		
Notes Payable	$ 40,000.00	
Acceptances Payable	120,000.00	
Accounts Payable	10,000.00	170,000.00
Reserves:		
Depreciation	$ 20,000.00	
Bad Debts	5,000.00	
Insurance	10,000.00	
Contingencies	20,000.00	55,000.00
Surplus		136,418.20
Total		$1,061,418.20

Calculate the book value of the common stock (par value $50 per share).

Solution to Problem 25

Net Worth of Company:		
Preferred Stock		$100,000.00
Common Stock		500,000.00
Surplus		136,418.20
Insurance Reserve		10,000.00
Contingent Reserve		20,000.00
		$766,418.20
Deduct—Preferred Stock Equity		100,000.00
Common Stock Equity		$666,418.20

$666,418.20 divided by 10,000 shares equals $66.64 book value of common stock.

Points Illustrated in Problem 25

(a) Preferred Stock. The nature of preferred stock is explained in Volume I, Chapter XXXIII, § 5.

Problem 26

The Nassau Engineering Company fails and a receiver is appointed on March 1, 1920, who on taking charge finds the company's liabilities and assets to be as follows: creditors, unsecured $59,100, partly secured $16,500, fully secured $13,500. The company owns real estate $15,000, which is mortgaged for $10,000; machinery and tools $30,000; materials $3,000, and book debts $9,000, including $2,500 in litigation on which a loss of 50% is expected; also securities of the value of $22,500 acquired in settlements, of which $7,500 are pledged with partly secured creditors and $14,000 with fully secured creditors. There are engineering contracts in force to the amount of $60,000, on which $45,000 has been expended. Cash in bank $750. The capital stock of the company is $75,000, and the accumulated losses on contracts, bad debts written off, and expenses show a deficiency of $48,850. Customers' bills have been discounted to the amount of $4,500, of which $1,500 will be dishonored in consequence of failure of obligor. The machinery and tools are expected to realize only 50% of the book value, and the real estate is appraised at $12,000. The cost to complete contracts is estimated at $30,000 by the sureties who offer $2,250 for the stock of materials on hand. Unpaid taxes and assessments amounting to $216 are discovered but no entry thereof appears in the company's books.

Prepare a statement of affairs and deficiency account in technical form.

Solution to Problem 26

NASSAU ENGINEERING COMPANY

STATEMENT OF AFFAIRS

March 1, 1920

Assets

Book Value		Expected to Realize	Deficiency
$ 750.00	Cash	$ 750.00	
9,000.00	Accounts Receivable .... $2,500 in liquidation on which a loss of 50% is expected.	7,750.00	$ 1,250.00

Book Value			Expected to Realize	Deficiency
22,500.00	Securities Owned		1,500.00	
	$14,000 pledged with fully secured creditors having claims of	$13,500.00		
	Pledged with partly secured creditors	7,500.00		
		$21,000.00		
3,000.00	Materials		2,250.00	750.00
45,000.00	Engineering Contracts ...		30,000.00	15,000.00
	Contract Price	$60,000.00		
	Less—Estimated cost to complete	30,000.00		
		$30,000.00		
15,000.00	Real Estate		2,000.00	3,000.00
	Appraised Value	$12,000.00		
	Less—Mortgage (per contra)	10,000.00		
		$ 2,000.00		
30,000.00	Machinery and Tools		15,000.00	15,000.00
$125,250.00	Totals		$59,250.00	$35,000.00
	Deduct—Preferred Claims (per contra):			
	Unpaid Taxes and Assessments		216.00	
	Balance available for Unsecured Creditors (Indicating a dividend to creditors of approximately 85%)		$59,034.00	
	Deficiency, per Deficiency Account		10,566.00	
			$69,600.00	

Liabilities

Book Value			Expected to Rank
$ 89,100.00	Accounts Payable		$68,100.00
	Deducted contra	$21,000.00	
10,000.00	Mortgage Payable		
	Deducted contra	10,000.00	
	Notes Receivable Discounted		1,500.00
	Unpaid Taxes and Assessments		
	Deducted contra	216.00	
$ 99,100.00	Total		$69,600.00
	Capital Obligations:		
	Capital Stock	$75,000.00	
	Less—Deficit	48,850.00	
26,150.00	Net Worth	$26,150.00	
$125,250.00			

NASSAU ENGINEERING COMPANY

DEFICIENCY ACCOUNT

March 1, 1920

Loss on Accounts Receivable	$ 1,250.00	Capital Stock	$75,000.00
Loss on Materials	750.00	Deficiency per Statement of Affairs	10,566.00
Loss on Uncompleted Contracts	15,000.00		
Loss on Real Estate	3,000.00		
Machinery and Tools ...	15,000.00		
Losses Not on Books:			
Taxes and Assessments	216.00		
Loss on Discounted Note	1,500.00		
Debit Balance of Profit and Loss Account	48,850.00		
	$85,566.00		$85,566.00

Points Illustrated in Problem 26

(a) Statement of Affairs. The reasons for the technical and special form of this statement are given in Volume I, Chapter XII, § 9.

(b) Differences from Balance Sheet. The points in which a statement of affairs differs from a balance sheet are described in Volume I, Chapter XII, § 3. The principal differences are in the valuation of assets and in the deductions of assets from liabilities, or vice versa, to record the securities held by creditors.

(c) Deficiency Account. This account is in the account form but it might be presented equally well in the statement or running form. The purpose of the account is described in Volume I, Chapter XII, § 11.

(d) Preferred Claims. The nature of preferred claims and the method of stating them in the statement of affairs are discussed in Volume I, Chapter XII, § 6, and in Volume IV, Chapter XXV, § 6.

(e) Expected Dividend. This solution indicates that creditors may reasonably expect a dividend of approximately 85%. In other words, each creditor is likely to receive 85 cents on the dollar. The practicability of showing this information is discussed in Volume I, Chapter XII, § 10.

(f) Notes Receivable Discounted. This is a contingent liability which is expected to become an actual one. For a discussion of this kind of liability and the importance of indicating it, see Volume I, Chapter XXVII, § 8.

(g) Distribution of Loss. The deficiency account shows that the total loss is borne in part by the owners and in part by the creditors. The portion borne by the latter is $10,566, as shown by the statement of affairs. For a discussion of this function of the deficiency account, see Volume I, Chapter XII, § 10.

(h) Net Worth. On the statement of affairs the deficit is deducted from the capital stock to secure the net worth. This procedure is discussed in Volume IV, Chapter XXI,

§ 7. Another reason for deducting this from the capital stock is to distinguish between the operating loss which resulted in the deficit and the loss on the realization of the assets.

Problem 27

The following is a trial balance of the books of the X Y Z Manufacturing Company, which has been declared bankrupt:

TRIAL BALANCE

At June 30, 1914

Real Estate and Buildings	$125,000.00	
Capital Stock		$300,000.00
Machinery and Equipment	160,000.00	
Customers' Accounts Receivable	170,000.00	
Notes Payable		250,000.00
Accounts Payable		312,000.00
Insurance Premiums Unexpired	3,000.00	
Mortgage on Buildings		65,000.00
Notes Receivable	26,000.00	
Interest Accrued on Mortgage		2,500.00
Cash on Hand and in Bank	6,500.00	
Inventory of Raw Material	85,000.00	
Inventory of Finished Goods	121,000.00	
Investments	12,000.00	
Deficit	221,000.00	
	$929,500.00	$929,500.00

The real estate and buildings are appraised at $101,000, and the machinery and equipment at $135,000. An examination of the customers' accounts shows the following condition: good $95,000, doubtful (expect to collect 33⅓%) $51,000, bad $24,000. The holders of the notes payable of $12,000 hold notes receivable in security of face value of $15,000, but worth only $10,000. A creditor of $55,000 on open account has in his possession the stock certificates for the investments assigned in blank and finished goods pledged to the value of $16,000. The insurance premiums unexpired have a cash value of $2,200. An examination of the notes receivable shows $9,000 good for collection, and $17,000 doubtful on which 50% will be collected. The investments have a marketable value of $16,500.

Prepare statement of affairs for submission to creditors, showing the amount on the dollar the creditors may expect to receive; also prepare deficiency statement.

(*Missouri C. P. A. Examination.*)

Solution to Problem 27

THE X, Y, Z, MANUFACTURING COMPANY

STATEMENT OF AFFAIRS

At June 30, 1914

Assets

		Book Value		Estimated to Realize
Cash on Hand and in Bank		$ 6,500.00		$ 6,500.00
Accounts Receivable:				
Good		95,000.00		95,000.00
Doubtful		51,000.00		17,000.00
Bad		24,000.00		
Notes Receivable:				
Good		9,000.00	$ 9,000.00	
Doubtful		17,000.00	8,500.00	
			$17,500.00	
Less—Notes held to secure Notes Payable:				
Book Value	$15,000.00			
Will Realize	10,000.00		10,000.00	7,500.00

	Book Value		Estimated to Realize
Finished Goods	121,000.00	$121,000.00	
Less—Pledged to secure Account Payable		16,000.00	105,000.00
Investments	12,000.00	$ 16,500.00	
Less—Pledged to secure Account Payable		16,500.00	
Inventory Raw Material	85,000.00		85,000.00
Insurance Premium Unexpired	3,000.00		2,200.00
Machinery and Equipment	160,000.00		135,000.00
Real Estate and Buildings	125,000.00	$101,000.00	
Less—Mortgage and Interest		67,500.00	33,500.00
Deficit	221,000.00		
Total	$929,500.00		
Amount available for distribution to Unsecured Creditors, being 93.68% of their claims, subject to realization and liquidation expense			$486,700.00
Deficiency, per Deficiency Account			32,800.00
			$519,500.00

Liabilities

	Book Value		Estimated to Rank
Preferred Claims (none)			
Fully Secured Claims:			
Mortgage on Buildings	$ 65,000.00		
Interest on Mortgage	2,500.00		
Deducted from Assets (per contra)			
Partly Secured Claims:			
Notes Payable	250,000.00		
Less—Notes Receivable (deducted per contra)		$ 10,000.00	$240,000.00
Accounts Payable	55,000.00		
Less:			
Finished Goods Pledged (per contra)		$ 16,000.00	
Investments Pledged (per contra)		16,500.00	22,500.00

	Book Value	Estimated to Rank
Unsecured Claims:		
Accounts Payable	257,000.00	257,000.00
Capital Stock	300,000.00	
Total	$929,500.00	
Total Unsecured Claims		$519,500.00

DEFICIENCY ACCOUNT

Book Deficit	$221,000.00	Capital Stock	$300,000.00
Shrinkage in Accounts Receivable	58,000.00	Appreciation of Investments	4,500.00
Shrinkage in Insurance Premium Unexpired .	800.00	Net Deficiency, per Statement of Affairs	32,800.00
Shrinkage in Notes Receivable	8,500.00		
Shrinkage in Machinery and Equipment	25,000.00		
Shrinkage in Real Estate	24,000.00		
	$337,300.00		$337,300.00

Points Illustrated in Problem 27

(a) Condensed Form. This form of statement of affairs differs from that in Problem 26 in that the shrinkage of each asset is not indicated in the statement. Such losses on realization are shown only in the deficiency account. Reference should be made to Volume I, Chapter XII, § 11.

(b) Ambiguity in Problem. There is an ambiguity in the problem in the statement, "A creditor of $55,000 on open account has in his possession the stock certificates for the investments assigned in blank and finished goods pledged to the value of $16,000." From this statement one may assume either that the creditor holds a total security of

$16,000 consisting of $12,000 in securities and $4,000 in finished goods, or that he holds $12,000 in securities and $16,000 in finished goods, making his total $28,000. The above solution is based on the second assumption. It is to be regretted that state boards of examiners do not avoid ambiguities of this sort.

(c) Interest on Mortgage. The solution properly shows that interest on the mortgage is secured in the same way that the principal is secured. In other words, when a mortgage loan is secured, the security applies to both principal and interest.

(d) Unexpired Insurance. The problem states that unexpired insurance has a cash value of $2,200. Accordingly, the solution states this amount in the "Estimated to Realize" account. It is questionable whether this treatment is correct. If the problem were less definite in its statement of the cash value, the unexpired insurance would be taken to have no realizable value because it would be assumed that the insurance must be continued.

(e) Appreciation of Asset. The investments have a book value of $12,000 but are expected to realize $16,500. This gain on realization would, of course, be an offset to the loss and would constitute an increase in the capital of the business.

Problem 28

The firm of Smith and Jones, of Columbus, Ohio, a partnership, was forced into bankruptcy. To protect creditors, each of the partners has also filed a voluntary petition in bankruptcy.

A trial balance taken from the firm books at October 31, 1913, is as follows:

John Smith		$ 35,000.00
William Jones		45,000.00
Cash	$ 875.00	
Land	10,000.00	
Buildings	30,500.00	
Machinery, Tools, etc.	35,000.00	
Furniture and Fixtures	1,500.00	
Horses and Wagons	2,350.00	
Accounts Receivable	58,900.00	
Notes Receivable	18,700.00	
Mortgage Payable—Real Estate		25,000.00
Accounts Payable		105,250.00
Notes Payable		42,500.00
Merchandise Inventory, January 1, 1913	59,725.00	
Sales		516,875.00
Purchases	196,375.00	
Productive Labor	130,500.00	
Manufacturing Expenses	125,000.00	
Selling Expenses	70,500.00	
Administrative and All Other Expenses	29,700.00	
	$769,625.00	$769,625.00

The mortgage is past due—interest 6%—last interest payment, July 1, 1913.

Accrued interest on notes receivable (good) amounts to $225.

Accrued interest on notes payable amounts to $900.

There were invoices for purchases amounting to $1,800, and wages $2,010, not recorded on books.

Unexpired insurance premiums amount to $350.

Accrued taxes amount to $425.

There is a chattel mortgage on the machinery securing notes payable, amounting to $10,000, and one of the creditors on open account holds a chattel mortgage of $4,000 on merchandise worth $2,500 given for purchases, the balance due on which is $3,000.

$7,500 of the good notes receivable have been assigned to secure notes payable for borrowed money.

The notes receivable are classified: $14,500 good; $1,800 doubtful; and the balance worthless.

The accounts receivable are classified: $40,500 good; $3,500 doubtful; and the balance worthless.

The land was appraised at $12,000; buildings $25,000; machinery and tools $26,000; furniture and fixtures $600; horses and wagons $1,500; and the merchandise inventory at $32,200.

The personal estate of Jones consists of a house and lot valued at $18,000, and securities valued at $7,500, and he owes for household debts $750, and to his father-in-law, in notes payable $20,000, for money borrowed from him.

The personal estate of Smith consists of a house and lot valued at $12,000, upon which there is a mortgage of $5,000; securities valued at $20,000, pledged as collateral for a loan of $15,000. He has other unsecured debts amounting to $2,990. From the foregoing prepare:

(a) Statement of affairs, Smith and Jones, October 31, 1913, exhibiting thereon also the percentage of their claims likely to be realized by unsecured creditors.

(b) Deficiency account. *(Ohio C.P.A. Examination.)*

Solution to Problem 28

ADJUSTING ENTRIES

October 31, 1913

Interest on Mortgage Payable (Administrative and Other Expense)	$ 500.00	
Interest Accrued on Mortgage		$ 500.00
Interest accrued on mortgage of $25,000, from July 1, 1913, to October 31, 1913.		

Interest Accrued on Notes Receivable	225.00	
Interest on Notes Receivable		225.00
Accrued interest on notes receivable.		
Interest on Notes Payable	900.00	
Interest Accrued on Notes Payable		900.00
Accrued interest on notes payable.		
Purchases	1,800.00	
Accounts Payable		1,800.00
To enter on the books invoices for purchases which were omitted.		
Productive Labor	2,010.00	
Wages Accrued		2,010.00
To enter on the books wages accrued and not paid to October 31, 1913.		
Unexpired Insurance	350.00	
Administrative Expense		350.00
To show unexpired insurance as of October 31, 1913.		
Manufacturing Expenses	425.00	
Taxes Accrued		425.00
Taxes accrued to October 31, 1913.		

PROFIT AND LOSS STATEMENT

January 1, 1913, to October 31, 1913

Sales			$516,875.00
Deduct—Cost of Sales:			
Purchases	$198,175.00		
Add—Difference in Inventories	27,525.00	$225,700.00	
Productive Labor		132,510.00	
Manufacturing Expenses		125,425.00	483,635.00
Gross Profit on Sales			$ 33,240.00
Deduct:			
Selling Expenses		$ 70,500.00	
Administrative and All Other Expenses		30,525.00	101,025.00
Net Loss			$ 67,785.00

(a)

SMITH AND JONES

STATEMENT OF AFFAIRS

October 31, 1913

Assets

Book Value				Expected to Realize	Deficiency
$ 875.00	Cash			$ 875.00	
58,900.00	Accounts Receivable				
	Good	$40,500.00			
	Doubtful	3,500.00			
	Worthless	14,900.00	$58,900.00	40,500.00	$18,400.00
18,700.00	Notes Receivable				
	Good	$14,500.00			
	Less—Notes assigned as security (see contra)	7,500.00	$ 7,000.00	7,000.00	4,200.00
	Doubtful	$ 1,800.00			
	Worthless	2,400.00	4,200.00		
225.00	Interest Accrued on Notes Receivable			225.00	
32,200.00	Merchandise Inventory				
	Less—Chattel Mortgage of $4,000 Merchandise worth		$ 2,500.00	29,700.00	
350.00	Unexpired Insurance				350.00
10,000.00	Land—Appraised Value	$12,000.00			
30,500.00	Buildings—Appraised Value	25,000.00	$37,000.00		
	Less—Mortgage and Accrued Interest		25,500.00	11,500.00	3,500.00

35,000.00	Machinery, Tools, etc.—Appraised Value	$26,000.00			
	Less—Chattel Mortgage	10,000.00	$16,000.00	16,000.00	9,000.00
1,500.00	Furniture and Fixtures			600.00	900.00
2,350.00	Horses and Wagons			1,500.00	850.00
	William Jones—Personal Estate:				
	House and Lot	$18,000.00			
	Securities	7,500.00	$25,500.00		
	Less—Personal Debts:				
	Household Debts	$ 750.00			
	Notes Payable	20,000.00	20,750.00	4,750.00	
	John Smith—Personal Estate:				
	House and Lot	$12,000.00			
	Less—Mortgage Payable	5,000.00	$ 7,000.00		
	Securities	$20,000.00			
	Less—Pledged to Secure Loan of $15,000	15,000.00	5,000.00		
	Net Assets		$12,000.00		
	Less—Unsecured Personal Debts		2,990.00	9,010.00	
$190,600.00	Totals			$121,660.00	$37,200.00
	Expected to Realize			$121,660.00	
	Deduct—Preferred Claims:				
	Wages Accrued		$ 2,010.00		
	Taxes Accrued		425.00	2,435.00	
	Net Free Assets applying to Unsecured Creditors, being 91.66% of their claims			$119,225.00	
	Deficiency			11,225.00	
				$130,450.00	

Liabilities

Book Value			Expected to Rank
$ 25,000.00	Mortgage Payable		
	(Deducted per contra)		
500.00	Interest Accrued on Mortgage Payable (per contra)		
107,050.00	Accounts Payable		$104,550.00
	Less—Chattel Mortgage of $4,000 on Merchandise worth	$ 2,500.00	
	(Deducted per contra)		
42,500.00	Notes Payable		25,000.00
	Less—Chattel Mortgage on Machinery (per contra)	$10,000.00	
	Notes Receivable Assigned (per contra)	7,500.00	
	Net Deduction	$17,500.00	
900.00	Accrued Interest on Notes Payable		900.00
	Preferred Claims (Deducted contra):		
2,010.00	Wages Accrued		
425.00	Taxes Accrued		
	Total		$130,450.00
	Capital Obligations:		
	John Smith, Investment	$35,000.00	
	William Jones, Investment	45,000.00	
	Total Investment	$80,000.00	
	Deduct—Loss for period	67,785.00	
12,215.00	Net Worth	$12,215.00	
$190,600.00			

(b)

Deficiency Account

Loss on Accounts Receivable	$ 18,400.00	Appreciation of Land	$ 2,000.00
Loss on Notes Receivable	4,200.00	William Jones:	
Loss on Unexpired Insurance	350.00	Investment	45,000.00
Loss on Real Estate	5,500.00	Personal Estate	4,750.00
Loss on Machinery, Tools, etc.	9,000.00	John Smith:	
Loss on Furniture and Fixtures	900.00	Investment	35,000.00
Loss on Horses and Wagons	850.00	Personal Estate	9,010.00
Net Trading Loss for period	67,785.00	Deficiency	11,225.00
	$106,985.00		$106,985.00

Points Illustrated in Problem 28

(a) Rights of Personal Creditors. It will be noted that the personal estate of each partner is listed to produce the value of his assets minus his personal liabilities. This follows from the fact that under the procedure of filing individual petitions in bankruptcy the personal creditors would be given precedence over the firm creditors so far as the personal assets are concerned. (See Volume I, Chapter XXXII, § 4, and Chapter XXXIII, § 3.)

(b) Interest on Mortgage. The security for the principal of the mortgage covers also the interest. See comments on Problem 27.

(c) Appreciation of Land. See comments on Problem 27 for a similar situation.

(d) Unexpired Insurance. In this case the unexpired insurance premiums are stated as having no realizable value. See the discussion of this point under Problem 27.

(e) Valuation of Accounts Receivable. The doubtful accounts receivable are stated as having no realizable value because the problem does not give any indication of the percentage which might be recovered. In a case of this sort it is better to be conservative in the statement of realizable value because otherwise the receiver or trustee would be overcharged and the loss on realization of assets would be overstated.

(f) Merchandise Inventory. The problem states that the merchandise inventory was appraised at $32,200. This amount is stated as realizable because it is assumed that the appraisal was on the liquidating basis and not on the assumption that the business would continue. Consequently, a loss on realization of merchandise is shown. It is more customary to value the merchandise on a going concern basis and then to appraise it on the liquidating basis in order to indicate the loss on realization. Since the problem does not give this information the solution cannot supply it.

Problem 29

The affairs of Peter Post, a manufacturer, were in a very critical condition, for, although he had an unimpaired investment of $62,500, and his books showed a clear increase of $6,022, he owed his trade creditors $25,289 and had only $265 in cash and $4,062 in receivable book accounts on which to rely for funds. The rest of his business estate was tied up in the following chattels which he had acquired in an effort to keep pace with a business growth that had outrun his capital: machinery and tools $31,497; raw materials $18,838; partly made goods $31,562; and finished wares $7,587.

It was also necessary, in order to continue operations, to have immediate cash for pay-rolls and incidental expenses.

A meeting of his principal creditors was called, and, as it appeared that the business was well established, profitable, and had a sure and growing market, they decided to advance him $6,000 in cash for immediate needs and extend his credit in a sufficient amount to permit of the purchase of necessary materials and generally to continue operations till the present stock of materials could be made up and realized on.

In order to insure the proper application of the funds and credit so provided, a trustee was appointed to administer the finances till the creditors' claims were satisfied, at which time the control would revert to the proprietor.

The subsequent operations under the trusteeship were as follows: cash paid for labor $15,725; for expenses $5,430; for additional tools $750; purchases on book account, charged to materials $6,300, to expenses $15,000; sales on book account $72,300; loss on collection on book debts $380; personal drawings of Peter Post $3,500.

The unliquidated values at the close of the trusteeship were as follows: inventory of raw materials $5,000; finished wares $27,900; accounts receivable outstanding $3,382; and accounts payable $89.

Prepare, with due regard to the grouping, order, and arrangement of the items, as best calculated clearly to display the facts, (a) realization and liquidation account, (b) trustee's cash account, (c) balance sheet of business as restored to Peter Post.

(*New York C. P. A. Examination.*)

Solution to Problem 29

PETER POST

REALIZATION AND LIQUIDATION ACCOUNT

Assets to be Realized:		Liabilities to be Liquidated:		
Machinery and Tools	$ 31,497.00	Trade Creditors		$ 25,289.00
Raw Material	18,838.00			
Goods in Process	31,562.00	Assets Realized:		
Finished Goods	7,587.00	By Trustee's Trading Account:		
Accounts Receivable	4,062.00	Raw Material	$18,838.00	
		Goods in Process	31,562.00	
Total	$ 93,546.00	Finished Goods	7,587.00	
Liabilities Liquidated:		Total	$57,987.00	
Trade Creditors	25,289.00	Accounts Receivable	3,682.00	61,669.00
		Assets Not Realized:		
		Machinery and Tools		31,497.00
		Loss on Realization, per Balance Sheet		380.00
	$118,835.00			$118,835.00

TRUSTEE'S TRADING ACCOUNT

Sales			$72,300.00
Cost of Goods Sold:			
Opening Inventory, per Realization and Liquidation Account		$57,987.00	
Purchases		6,300.00	
Labor		15,725.00	
Total		$80,012.00	
Closing Inventories:			
Raw Material	$ 5,000.00		
Finished Goods	27,900.00	32,900.00	
Net			47,112.00
Gross Profit			$25,188.00
Expenses			20,430.00
Net Profit, per Balance Sheet			$ 4,758.00

TRUSTEE'S CASH ACCOUNT

Balance, received from Peter Post		$ 265.00
Receipts:		
Loan from Principal Creditors	$ 6,000.00	
Accounts Receivable:		
Collections on Old Accounts	3,682.00	
Collections on Trading Accounts	68,918.00	78,600.00
Total Available Funds		$78,865.00
Payments:		
Labor	$15,725.00	
Expenses	5,430.00	
Machinery and Tools	750.00	
Personal Drawings by Peter Post	3,500.00	
Loan from Principal Creditors	6,000.00	
Trade Creditors:		
Payments on Old Accounts	25,289.00	
Payments on Trading Accounts	21,211.00	77,905.00
Balance, at close of Trusteeship		$ 960.00

BALANCE SHEET AT CLOSE OF TRUSTEESHIP

Assets

Current Assets:		
Cash	$ 960.00	
Accounts Receivable	3,382.00	
Inventory:		
Finished Goods	27,900.00	
Raw Material	5,000.00	
Total		$37,242.00
Fixed Assets:		
Machinery and Tools		32,247.00
Total		$69,489.00

Liabilities

Current Liabilities:		
Trade Creditors		$ 89.00
Peter Post, Capital:		
Balance at beginning of Trusteeship	$68,522.00	

Add—Net Profit on Trustee's Trading		4,758.00	
Total		$73,280.00	
Deduct:			
Loss on Realization of Assets	$ 380.00		
Cash Drawings by Peter Post	3,500.00	3,880.00	
Balance at close of Trusteeship			69,400.00
Total			$69,489.00

Points Illustrated in Problem 29

(a) Realization and Liquidation Statement. The reasons for the technical form of this statement are discussed in Volume I, Chapter XIII, § 3.

(b) Omission of Cash. In this solution, cash is not included among the assets to be realized because it has already been realized, "realization" meaning the reduction of assets to cash. It may, however, be included among the "assets to be realized" and among the "assets realized" but such inclusion would have no effect upon the determination of the loss on realization. As pointed out in Volume I, Chapter XIII, § 9, the inclusion of cash facilitates to some extent the comparison of the assets listed on the realization and liquidation statement with the assets listed on a balance sheet or a statement of affairs.

(c) Trading Result. It is essential that the profit or loss from trading be distinguished from the loss or gain on realization. Consequently, a trustee's trading account is presented in addition to the realization and liquidation statement. For a discussion of the principles involved see Volume IV, Chapter XXV, § 5.

(d) Form of Trading Statement. The trading statement is in simple form, prepared in accordance with principles outlined in Volume I, Chapter IX, § 15.

(e) Proprietor's Drawings. The drawings by the proprietor are stated in a way to indicate that they are not expenses. This is in accordance with the discussion in Volume I, Chapter VIII, § 7.

(f) Tie-Up between Statements and Balance Sheet. As pointed out in Volume IV, Chapter XXI, § 13, it is desirable to connect statements of trading, or profit or loss, or others of an operating nature such as the realization and liquidation account, with the balance sheet, which shows the financial position after the operations are recorded. In this solution this connection is indicated by the analysis of the Capital account shown on the balance sheet.

Problem 30

X, Y, and Z, foundry men, unable to meet their obligations, suspend payment January 1, 1908, and appoint a trustee to realize and liquidate for the benefit of their creditors. The books showed the following assets and liabilities:

Assets

Land and Buildings	$125,000.00
Machinery and Tools	75,000.00
Furniture and Fixtures	10,000.00
Materials and Supplies	95,000.00
Notes Receivable	15,000.00
Accounts Receivable	115,000.00
Cash	450.00
	$435,450.00

Liabilities

Mortgage on Foundry Premises	$100,000.00
Notes Payable	135,000.00
Accounts Payable	105,000.00
Interest Accrued on Mortgage	1,250.00
Taxes Accrued (estimated)	835.00
Capital	93,365.00
	$435,450.00

The trustee's cash receipts and payments during the year 1908 are as follows:

Receipts

Notes Receivable (outstanding January 1, 1908)	$ 15,000.00
Accounts Receivable (outstanding January 1, 1908)	106,500.00
Cash Sales	5,435.00
Notes Receivable (contracted during 1908)	13,500.00
Accounts Receivable (contracted during 1908)	212,000.00
Total Receipts	$352,435.00

Payments

Notes Payable	$ 25,000.00
Accounts Payable	35,000.00
Interest on Mortgage, one year at 5%	5,000.00
Taxes for year 1907	865.00
Purchase of Material and Supplies	98,000.00
Labor	135,000.00
General Expenses	45,000.00
Interest on Bills Payable to September 30, 1908, at 5%	2,800.00
Total Payments	$346,665.00

Other transactions were as follows:

Sales on credit		$335,000.00
Bad debts written off accounts prior to January 1, 1908	$8,000.00	
Bad debts written off accounts subsequent to January 1, 1908	2,000.00	10,000.00
Discounts and allowances to customers' accounts prior to January 1, 1908	$ 500.00	
Discounts and allowances to customers' accounts subsequent to January 1, 1908	300.00	800.00
Notes received from customers		20,000.00
Notes given to creditors ($110,000 being renewals)		180,000.00
Inventory of materials, December 31, 1908		92,000.00

At the end of the year the business was returned to the owners.

Prepare realization and liquidation account, and balance sheet.

(*Michigan C. P. A. Examination.*)

Solution to Problem 30

X, Y, AND Z

REALIZATION AND LIQUIDATION ACCOUNT

December 31, 1908

Assets to be Realized:		
Land and Buildings	$125,000.00	
Machinery and Tools	75,000.00	
Furniture and Fixtures	10,000.00	
Materials and Supplies	95,000.00	
Notes Receivable	15,000.00	
Accounts Receivable	115,000.00	$435,000.00
Liabilities Liquidated:		
Notes Payable	$ 25,000.00	
Accounts Payable	35,000.00	
Interest Accrued on Mortgage	1,250.00	
Taxes Accrued (estimated)	835.00	62,085.00
Liabilities Not Liquidated:		
Mortgage Payable	$100,000.00	
Notes Payable	110,000.00	
Accounts Payable	70,000.00	280,000.00
Supplementary Charges:		
Taxes in Excess of Estimated Amount		30.00
		$777,115.00
Liabilities to be Liquidated:		
Mortgage Payable	$100,000.00	
Notes Payable	135,000.00	
Accounts Payable	105,000.00	
Interest Accrued on Mortgage	1,250.00	
Taxes Accrued (estimated)	835.00	$342,085.00

Assets Realized:		
Notes Receivable	$ 15,000.00	
Accounts Receivable	106,500.00	
Materials and Supplies, per Trustee's Trading Account	95,000.00	216,500.00
Assets Not Realized:		
Land and Buildings	$125,000.00	
Machinery and Tools	75,000.00	
Furniture and Fixtures	10,000.00	210,000.00
Loss on Realization and Liquidation, per Balance Sheet		8,530.00
		$777,115.00

X, Y, AND Z

TRUSTEE'S TRADING ACCOUNT

For the Year Ended December 31, 1908

Sales		$340,435.00
Cost of Goods Sold:		
Inventory, January 1, 1908, per Realization and Liquidation Statement	$ 95,000.00	
Purchases	98,000.00	
Labor	135,000.00	
Total	$328,000.00	
Inventory, December 31, 1908, per Balance Sheet	92,000.00	236,000.00
Gross Profit		$104,435.00
Expenses:		
General Expense	$ 45,000.00	
Interest on Mortgage	5,000.00	
Interest on Notes Payable	2,800.00	
Bad Debts Written Off	2,000.00	
Taxes (estimated)	865.00	
Discounts and Allowances	300.00	55,965.00
Net Profit, per Balance Sheet		$ 48,470.00

X, Y, AND Z

BALANCE SHEET

December 31, 1908

Assets

Fixed Assets:		
Land and Buildings	$125,000.00	
Machinery and Tools	75,000.00	
Furniture and Fixtures	10,000.00	$210,000.00
Current Assets:		
Cash	$ 6,220.00	
Accounts Receivable	100,700.00	
Notes Receivable	6,500.00	
Merchandise	92,000.00	205,420.00
Total Assets		$415,420.00

Liabilities and Capital

Fixed Liabilities:		
Mortgage Payable		$100,000.00
Current Liabilities:		
Notes Payable	$180,000.00	
Interest Accrued on Mortgage	1,250.00	
Taxes Accrued	865.00	182,115.00
Total Liabilities		$282,115.00
Capital:		
Balance, January 1, 1908	$ 93,365.00	
Profit on Trading	48,470.00	
	$141,835.00	
Loss on Realization and Liquidation, per Realization and Liquidation Account	8,530.00	
Balance, December 31, 1908		133,305.00
Total Liabilities and Capital		$415,420.00

Points Illustrated in Problem 30

(a) Realization and Liquidation Statement. The reasons for the technical form of this statement are explained in Volume I, Chapter XIII, § 3.

(b) Trading Result. The necessity for distinguishing the result of trading from the loss or gain on realization is pointed out in Volume IV, Chapter XXV, § 5.

(c) Form of Trading Statement. The trading statement given in the solution is a simple form following the lines laid down in Volume I, Chapter IX, § 15.

(d) Accrued Liability for Taxes. The desirability of setting up an estimated amount for this liability is pointed out in Volume IV, Chapter III, § 1.

(e) Supplementary Charges. The purpose of the section of the realization and liquidation account entitled "Supplementary Charges" is explained in Volume I, Chapter XIII, § 12.

(f) Omission of Cash. See the discussion on this point under Problem 29.

Problem 31

Smith and Murray have been doing business as equal partners and have kept their books by single entry. They wish to admit Davis as a partner and have their books kept by double entry. Their books and inventory taken show the following assets and liabilities: merchandise $9,241; cash $850; real estate $3,000; accounts receivable $6,941; store fixtures $571; Smith's investment account, credit $6,400; Murray's investment account, credit $5,390; accounts payable $4,175; notes payable $975.

Prepare statement of assets and liabilities and find each partner's present worth, after which make opening entry for the double-entry set of books. Davis is admitted and invests cash $3,000; merchandise $2,000; notes receivable $1,000. Make opening entry for Davis.

Solution to Problem 31

SMITH AND MURRAY

STATEMENT OF ASSETS AND LIABILITIES

Assets

Cash	$ 850.00	
Accounts Receivable	6,941.00	
Merchandise	9,241.00	
Real Estate	3,000.00	
Store Fixtures	571.00	
Total Assets		$20,603.00

Liabilities

Notes Payable	$ 975.00	
Accounts Payable	4,175.00	
Total Liabilities		5,150.00
Net Worth		$15,453.00

STATEMENT SHOWING NET PROFIT

Net Worth		$15,453.00
Deduct—Net Balances of Capital Accounts:		
Smith	$6,400.00	
Murray	5,390.00	11,790.00
Net Profit:		
Smith, one-half	$1,831.50	
Murray, one-half	1,831.50	$ 3,663.00

OPENING ENTRIES

Cash	$ 850.00	
Accounts Receivable	6,941.00	
Merchandise	9,241.00	
Store Fixtures	571.00	
Real Estate	3,000.00	
Notes Payable		$ 975.00
Accounts Payable		4,175.00
Smith, Capital		8,231.50
Murray, Capital		7,221.50
Cash	3,000.00	
Notes Receivable	1,000.00	
Merchandise	2,000.00	
Davis, Capital		6,000.00

Points Illustrated in Problem 31

(a) Single-Entry Statement. The preparation of statements as required in this problem, where the books of account have not been kept by double entry, is outlined in Volume I, Chapter XXXV, § 9.

(b) Opening Entry for Partnership. The entries required for opening partnership accounts are outlined in Volume I, Chapter XXXI, § 3.

Problem 32

On January 1, 1920, Robert A. Grant began business as a retail dry goods merchant. His capital at the time consisted of the following assets: merchandise $12,300, cash $1,150, furniture and fixtures $600. There were no liabilities to be recorded at the outset of the business enterprise.

He sold most of his goods for cash, although credit was extended in certain cases.

The books of account, which had been kept by single entry, consisted of a ledger and a cash book, and various supporting memorandum records, which, however, from their nature were not entirely reliable.

At the end of three months, Mr. Grant desired to ascertain whether he was making any money. The clerks were set to work taking inventory, and the bookkeeper was instructed to prepare a list showing all outstanding accounts receivable and payable, and all other assets not recorded in the accounts. This produced the following results:

Merchandise on Hand	$24,062.62
Accounts Receivable	2,165.74
Accounts Payable	15,203.21
Cash in Bank	2,572.43
Cash in Drawer	224.17

Purchases of office equipment during the period amounting to $275 were disclosed by an inspection of the paid invoices on file.

Invoices have been received and entered on the books covering the purchase of goods amounting to $375.20. The goods had not yet arrived and accordingly were not included in the inventory.

Feeling the need of more working capital, Mr. Grant sold, on February 10, certain bonds which he had been holding as investments, realizing thereon $1,250, which amount was placed in the business.

Prepare:

(a) Statements showing the assets and liabilities and the net profit or loss for the period.

(b) Entry to open double-entry books.

Solution to Problem 32

(a)

ROBERT A. GRANT

COMPARATIVE STATEMENT OF ASSETS AND LIABILITIES

For Three Months

Assets

	Jan. 1	Mar. 31	Increase
Cash in Bank	$ 1,150.00	$ 2,572.43	$ 1,422.43
Inventory	12,300.00	24,437.82	12,137.82
Accounts Receivable	....	2,165.74	2,165.74
Cash in Drawer	....	224.17	224.17
Furniture and Fixtures	600.00	875.00	275.00
Total Assets	$14,050.00	$30,275.16	$16,225.16

Liabilities

Accounts Payable	....	$15,203.21	$15,203.21
Total Liabilities	....	$15,203.21	$15,203.21
Net Worth	$14,050.00	$15,071.95	$ 1,021.95
Net Increase in Net Worth			$ 1,021.95
Deduct—Additional Investment			1,250.00
Net Loss			$ 228.05

(b)

March 31, 1920

Cash in Bank	$ 2,572.43	
Cash in Drawer	224.17	
Inventory	24,437.82	
Accounts Receivable	2,165.74	
Furniture and Fixtures	875.00	
Robert A. Grant, Capital		$15,071.95
Accounts Payable		15,203.21

To change from single to double entry.

Points Illustrated in Problem 32

(a) Single-Entry Statements. The method of preparing statements of profit and loss from single-entry accounts is described in Volume I, Chapter XXXV, § 7. This method would necessarily be used wherever the accounts had not been kept by double entry.

(b) Invoices for Merchandise Not Received. It is necessary at the close of each fiscal period to ascertain that all invoices for merchandise purchased but not received are correctly recorded in the accounts. In view of the fact that the invoice represents a current account payable, whereas the merchandise, although a current asset, must be sold before cash can be realized upon it, it is necessary to record both the merchandise in the inventory and the invoice among the accounts payable. Otherwise, the true financial condition of the business will not be indicated.

(d) Furniture and Fixtures. Attention is invited to the fact that the purchase of furniture and fixtures in this example does not represent an expense of the business. (See Volume I, Chapter IX, § 5, and Volume IV, Chapter IV, § 13.)

(e) Capital Contributions. This problem illustrates the fact that the contribution by a proprietor of additional capital does not constitute income of the business. This is explained in Volume I, Chapter III, § 4, and Chapter X, § 15.

Problem 33

A "single-entry" set of books for 1912 are sent to you with an order to prepare a profit and loss statement for the year and a balance sheet at December 31. The starting capital was $34,500.

The accounts receivable	Jan. 1	$26,500.00	Dec. 31	$44,000.00
The accounts payable	Jan. 1	7,500.00	Dec. 31	9,750.00
The merchandise	Jan. 1	8,500.00	Dec. 31	9,500.00
The plant and machinery	Jan. 1	10,000.00	Dec. 31	10,000.00
The furniture and fixtures	Jan. 1	700.00	Dec. 31	700.00

A summary of cash book for the year shows as follows:

Received:	
Accounts Receivable	$30,000.00
Capital Paid In	2,500.00
Disbursed:	
Bank Overdraft, January 1	$ 3,700.00
Accounts Payable	12,500.00
General Expense	5,000.00
Wages	7,750.00
Personal Account	1,500.00

Leaving a bank account of $2,000, and currency on hand $50.

Provide 5% interest on capital, disregarding additions during the year and personal drafts, deducting 10% for plant and machinery depreciation, 5% for furniture and fixtures, and 5% for bad debts reserve.

(*Illinois C. P. A. Examination.*)

Solution to Problem 33

COMPARATIVE STATEMENT OF ASSETS AND LIABILITIES

Assets	Jan. 1	Dec. 31	Increase	Decrease
Cash	....	$ 2,050.00	$ 2,050.00	....
Accounts Receivable	$26,500.00	44,000.00	17,500.00	....
Merchandise	8,500.00	9,500.00	1,000.00	....
Plant and Machinery	10,000.00	9,000.00	....	$1,000.00
Furniture and Fixtures	700.00	665.00	....	35.00
Total Assets	$45,700.00	$65,215.00	$19,515.00	....

Liabilities	Jan. 1	Dec. 31	Increase	Decrease
Accounts Payable	$ 7,500.00	$ 9,750.00	$ 2,250.00	....
Bank Overdraft	3,700.00	....	....	$3,700.00
Reserve for Bad Debts	....	2,200.00	2,200.00	....
Total Liabilities	$11,200.00	$11,950.00	$ 750.00	....
Net Worth	$34,500.00	$53,265.00	$18,765.00	....

Net Increase in Net Worth		$18,765.00
Add—Drawings		1,500.00
		$20,265.00
Less:		
Capital Paid In	$2,500.00	
5% Interest on Capital of January 1	1,725.00	4,225.00
Net Profit for the year		$16,040.00

PROFIT AND LOSS STATEMENT

One Year Ending December 31

Net Sales		$47,500.00
Less—Cost of Goods Sold:		
Merchandise on Hand, January 1	$ 8,500.00	
Net Purchases	14,750.00	
	$23,250.00	
Less—Merchandise on Hand, December 31	9,500.00	13,750.00
Gross Profit on Sales		$33,750.00
Deduct:		
General Expenses	$ 5,000.00	
Wages	7,750.00	
Depreciation of Plant and Machinery	1,000.00	
Depreciation of Furniture and Fixtures	35.00	
Loss on Bad Debts	2,200.00	
Interest on Capital (5% on $34,500)	1,725.00	17,710.00
Net Profit for the year		$16,040.00

BALANCE SHEET

December 31

Assets

Cash		$ 2,050.00
Accounts Receivable	$44,000.00	
Less—Reserve for Bad Debts	2,200.00	41,800.00
Merchandise on Hand		9,500.00
Plant and Machinery		9,000.00
Furniture and Fixtures		665.00
Total Assets		$63,015.00

Liabilities and Net Worth

Liabilities—Accounts Payable			$ 9,750.00
Net Worth:			
Capital, January 1		$34,500.00	
Add:			
Net Profit for the year	$16,040.00		
Capital Paid In	2,500.00		
5% on Capital of January 1	1,725.00	20,265.00	
		$54,765.00	
Less—Drawings		1,500.00	53,265.00
Total Liabilities and Net Worth			$63,015.00

Points Illustrated in Problem 33

(a) Single-Entry Statements. For the method of preparing statements from single-entry records, see Volume I, Chapter XXXV, § 7.

(b) Proprietor's Drawings. The fact that drawings by the proprietor are not expenses of the business and must not be so construed in preparing single-entry statements is discussed in Volume I, Chapter XXXV, § 7.

(c) Interest on Capital. This problem illustrates the fact that calculation of interest on capital has no effect upon the net profit of the business. This is further described in Volume I, Chapter XXXI, § 10.

(d) Depreciation and Bad Debts. The principles underlying the handling of these items are described in Volume I, Chapter XXIX, and in Volume IV, Chapter XII.

(e) Depreciated Asset Accounts. In this problem the plant and machinery and the furniture and fixtures are stated in the balance sheet at their net amounts after the deduction of the amount of depreciation. This is generally not considered good practice. Instead, reserve accounts should be set up to record the depreciation. This is explained in Volume I, Chapter XXIX, and in Volume IV, Chapter XII.

(f) Calculation of Net Sales and Net Purchases. In this problem the amount of net sales is determined by adding the cash collections to the increase in the accounts receivable. The calculation of net purchases is similarly made by adding the increase in accounts payable and the cash payments. This latter step is based on the assumption that all the accounts payable are incurred for merchandise purchases.

Problem 34

You are asked to prepare an account showing the profit earned by a concern for a certain period. The books have been kept by single entry and you gather from them the following:

Capital	$19,360.00
Cash	2,600.00
Accounts Receivable	15,600.00
Merchandise	10,400.00
Fixtures	1,650.00
Accounts Payable	3,850.00
Bills Payable	5,000.00
Merchandise used by Proprietor	800.00

The capital above set out is the balance of the account after $1,500 withdrawn during the period, and $1,200 for salary, have been charged up against it.

Set up the Profit and Loss account.

(*New York C. P. A. Examination.*)

Solution to Problem 34

CALCULATION OF NET PROFIT

Capital at End of Period:			
Assets:			
Cash	$ 2,600.00		
Accounts Receivable	15,600.00		
Merchandise	10,400.00		
Fixtures	1,650.00	$30,250.00	
Liabilities:			
Accounts Payable	$ 3,850.00		
Bills Payable	5,000.00	8,850.00	
Capital			$21,400.00
Capital at Beginning of Period:			
Ledger Balance		$19,360.00	
Add:			
Cash Drawings by Proprietor	$ 1,500.00		
Salary Drawn by Proprietor	1,200.00	2,700.00	22,060.00
Decrease in Capital			$ 660.00
Deduct:			
Cash Drawings by Proprietor		$ 1,500.00	
Salary Drawn by Proprietor		1,200.00	
Merchandise Drawn by Proprietor		800.00	3,500.00
Net Profit for the Period			$ 2,840.00

Points Illustrated in Problem 34

(a) Profit and Loss Account. In this problem the State Board of Examiners ask for a Profit and Loss account when obviously what is meant is, not an account, but a statement showing the calculation of profit. As pointed out in Volume I, Chapter IX, § 6, care must be exercised when a Profit and Loss account is asked for to determine whether or not an account is really required. In this case, as explained in Volume I, Chapter XXXV, § 11, it would be impossible to set up a Profit and Loss account, strictly speaking, because no nominal accounts have been kept and the factors or elements that would enter into a Profit and Loss account are not known. Accordingly, the solution does not show an account but a calculation.

(b) Inadequacy of Single Entry. This problem illustrates the inadequacy of profit and loss statements prepared from single-entry accounts. While the net profit can be ascertained, the various elements that cause it and the various kinds of expenses that affect it cannot be known. This inadequacy is one of the reasons why double-entry bookkeeping is almost universally preferred. (See Volume I, Chapter XXXV, § 11.)

(c) Capital. Capital is the excess of assets over liabilities, as explained in Volume I, Chapter III, § 1.

(d) Bills Payable. As explained in Volume I, Chapter XXVII, §§ 2 and 3, it is better to use the term "notes payable" instead of "bills payable."

(e) Proprietor's Salary. The fact that this so-called salary is actually a drawing on account of profits and does not constitute a real expense of the business is explained in Volume I, Chapter XXXI, § 12. It is customary in many businesses to record these so-called salaries for statistical purposes and to enable one partner to draw more than another when he renders greater or more valuable service.

(f) Merchandise Withdrawn. The problem does not state whether the $800 is the cost or the selling price of the merchandise. When a proprietor withdraws merchandise for his own use he should be charged with it at cost, care being taken not to include such drawings among the regular sales of the business. This matter is explained in Volume I, Chapter X, § 20.

(g) Decrease in Capital. Notwithstanding the fact that there was a net profit of $2,840, the capital in the business decreased $660. This resulted from the fact that the cash drawings and salary of the proprietor together with the merchandise withdrawn by him exceeded the net profits of the business. This problem illustrates the fact that the decrease or increase in capital does not indicate the net profit or loss. (See Volume I, Chapter XXXV.)

Problem 35

Classify and group the following accounts of a manufacturing company according to kind of asset, liability, loss, and gain:

1. Accounts Payable
2. Accounts Receivable
3. Accrued Salaries and Wages
4. Advertising
5. Bad Debts Written Off
6. Bills Payable
7. Bills Receivable
8. Bond Discount
9. Bond Premium
10. Bond Interest Accrued
11. Capital Stock
12. Cash
13. Credit Department Expenses
14. Depreciation of Buildings, Machinery, and Plant
15. Depreciation of Workmen's Cottages
16. Directors' Fees
17. Discount on Purchases
18. Discount on Sales
19. Federal Corporation Tax
20. First Mortgage Bonds
21. Freight and Cartage Inward
22. Freight and Cartage Outward
23. General Office Expenses
24. Good-Will
25. Insurance
26. Insurance Premiums Unexpired
27. Interest on Bills Payable
28. Interest on Bonds
29. Income from Investments
30. Inventory, Raw Materials
31. Inventory, Goods in Process
32. Inventory, Manufactured Goods
33. Investments (Outside)
34. Maintenance of Buildings, Machinery, and Plant
35. Maintenance of Workmen's Cottages
36. Manufacturing Power, Heat, and Light
37. Miscellaneous Factory Expenses
38. Miscellaneous Selling Expenses
39. Non-productive Labor
40. Office Equipment
41. Office Salaries
42. Officers' Salaries and Expenses
43. Organization Expenses

44. Patent Rights
45. Patterns and Drawings
46. Plant Site
47. Plant Buildings
48. Plant, Machinery, and Equipment
49. Productive Labor
50. Purchasing Department Expenses
51. Raw Materials Purchased
52. Rent of Workmen's Cottages
53. Reserve for Depreciation of Buildings, Machinery, and Plant
54. Reserve for Depreciation of Workmen's Cottages
55. Reserve for Doubtful Accounts
56. Reserve for Sinking Fund
57. Returns and Allowances on Purchases
58. Returns and Allowances on Sales
59. Sales of Manufactured Goods
60. Sales of Waste Material
61. Sales Agents' Commissions
62. Salesmen's Salaries
63. Salesmen's Expenses
64. Sinking Fund Investments
65. Surplus
66. Taxes on Plant and Equipment
67. Taxes Accrued
68. Workmen's Cottages

(*Wisconsin C. P. A. Examination.*)

Solution to Problem 35

Assets

Fixed Assets:

46. Plant Site
47. Plant Buildings
48. Plant, Machinery, and Equipment
68. Workmen's Cottages
40. Office Equipment
24. Good-Will
44. Patent Rights
45. Patterns and Drawings

Investments:

33. Investments (Outside)
64. Sinking Fund Investments

Current Assets:

12. Cash
2. Accounts Receivable
7. Bills Receivable

Current Assets—*Continued*

Inventories:

30. Inventory, Raw Materials
31. Inventory, Goods in Process
32. Inventory, Manufactured Goods

Deferred Charges and Prepaid Items:

43. Organization Expenses
26. Insurance Premiums Unexpired

Liabilities and Capital

Fixed Liabilities:

20. First Mortgage Bonds

Current Liabilities:

1. Accounts Payable
6. Bills Payable

Accrued Items:

3. Accrued Salaries and Wages
10. Bond Interest Accrued
67. Taxes Accrued

Reserves:

53. Reserve for Depreciation of Buildings, Machinery, and Plant
54. Reserve for Depreciation of Workmen's Cottages
55. Reserve for Doubtful Accounts
56. Reserve for Sinking Fund

Capital:

11. Capital Stock
65. Surplus

Income and Expense

Manufacturing Cost Accounts:

49. Productive Labor
51. Raw Materials Purchased (after elimination of inventory)

Manufacturing Cost Accounts—*Continued*

21. Freight and Cartage Inward
57. Returns and Allowances on Purchases
50. Purchasing Department Expenses

Manufacturing Expenses:

39. Non-productive Labor
34. Maintenance of Buildings, Machinery, and Plant
36. Manufacturing Power, Heat, and Light
66. Taxes on Plant and Equipment
25. Insurance
14. Depreciation of Buildings, Machinery, and Plant
37. Miscellaneous Factory Expenses
15. Depreciation of Workmen's Cottages
35. Maintenance of Workmen's Cottages

Deductions from Manufacturing Cost:

52. Rent of Workmen's Cottages
60. Sales of Waste Material

Trading Accounts:

59. Sales of Manufactured Goods
58. Returns and Allowances on Sales

Selling Expenses:

4. Advertising
62. Salesmen's Salaries
61. Sales Agents' Commissions
63. Salesmen's Expenses
13. Credit Department Expenses
22. Freight and Cartage Outward
38. Miscellaneous Selling Expenses

General Administrative Expenses:

42. Officers' Salaries and Expenses
16. Directors' Fees
41. Office Salaries
23. General Office Expenses
19. Federal Corporation Tax

Capital Expenses:
- 18. Discount on Sales
- 5. Bad Debts Written Off
- 27. Interest on Bills Payable
- 8. Bond Discount
- 28. Interest on Bonds

Capital Income:
- 17. Discount on Purchases
- 29. Income from Investments
- 9. Bond Premium

Points Illustrated in Problem 35

(a) General Classification of Accounts. This problem illustrates the general classification of accounts as described in Volume I, Chapter VI.

(b) Working Capital. The solution is arranged to indicate the excess of current assets over current liabilities, which constitutes the working capital. The necessity for this form is explained in Volume I, Chapter XI, § 14.

(c) Separate Account for Buildings. The buildings are represented by an account distinct from that for land. The desirability of this is pointed out in Volume IV, Chapter XVII, § 4.

(d) Bills Receivable and Payable. Attention is invited to the fact that this problem refers to "bills receivable" and "bills payable." It is generally better to designate such items by the terms "notes receivable" and "notes payable," as pointed out in Volume I, Chapter XXVII, § 3. As this problem was set by a state board of examiners, the terminology could not be changed. It is customary, however, to use the term "notes" instead of "bills." Historical explanation of the latter term is given in the chapter to which reference is here made.

(e) Deferred Charges. The advisability of setting up deferred charges is pointed out in Volume IV, Chapter II, § 3.

(f) Accrued Liabilities. The desirability of recording accrued liabilities is pointed out in Volume IV, Chapter III, § 1.

(g) Separate Reserve Accounts. This problem illustrates the use of separate reserves as advocated in Volume I, Chapter XXIX, § 4.

(h) Balance Sheet Treatment of Reserves. In this solution the reserves for depreciation and for doubtful accounts are shown on the right-hand side of the balance sheet, but it is generally considered better to deduct them from the asset accounts to which they apply. This matter is discussed in Volume IV, Chapter VIII, § 2. The reserve for sinking fund may properly be shown in the position in which it appears in this solution. This kind of reserve is discussed in Volume IV, Chapter XI, § 10.

(i) Capital Stock and Surplus Combined. It will be noted that the capital stock and the surplus are combined to show the total capital. This is in accordance with the principles stated in Volume I, Chapter II, § 8.

(j) Separate Account for Surplus. The necessity for recording the surplus in a separate account is explained in Volume I, Chapter XXXIII, § 3.

(k) Freight and Cartage Inward. This item is treated as a part of the cost of merchandise in accordance with the principles explained in Volume I, Chapter IX, § 8.

(l) Depreciation. The depreciation of buildings, machinery, and plant is treated as a manufacturing expense in accordance with Volume I, Chapter XXIX, §§ 1 and 4.

(m) Freight and Cartage Outward. This item is shown as a selling expense but by some accountants it is usually treated as a deduction from sales. This phase of the problem is discussed in Volume I, Chapter IX, § 7.

(n) Cash Discounts. Cash discounts on sales and purchases are shown as capital expenses and capital income respectively. This is considered better than to show them as adjustments of the sale or purchase price. (See Volume I, Chapter XXV, § 8.)

(o) Bond Discount and Premium. These items appear under capital expense and capital income respectively. As pointed out in Volume IV, Chapter X, § 10, they are proratable adjustments of the bond interest and should be extended over the life of the bonds.

(p) Income from Investments. This item is properly shown as capital income because it is extraneous to the operations of the business. This matter is discussed in Volume I, Chapter IX, § 12.

(q) Workmen's Cottages. The accounts concerning workmen's cottages may be treated either as operating or as extraneous matter. In a specific case the decision should be made in consideration of the purpose of the cottages. If they safeguard the health of workmen and encourage good living conditions which are vital to the quality of the daily labor, the operation of the cottages may be considered a manufacturing or operating item. In any event, the rent income is a reduction of the expense involved and if the latter is regarded as a manufacturing or operating item the rent income should not be considered as capital income. The net expense or income should be shown.

(r) Taxes and Insurance on Plant and Equipment. These two items are shown as manufacturing expenses. Economists would be likely to regard them as capital expenses. A discussion of the reasons for such treatment can be found in any standard text-book on economics, but as it is beyond the scope of this set this point is not elaborated in any of these volumes. From the point of view of the business accountant these items may properly be regarded as manufacturing expenses.

(s) Federal Corporation Tax. This item is shown as a general administrative expense. The same comments apply as are noted in the preceding point.

Problem 36

Goods are supplied to a branch at 120% of cost, or $24,000. The branch reports an inventory of $15,000;

sales $30,000; expenses paid $8,000; collections $10,500; and bad debts $750.

Formulate all entries necessary to record transactions, including entries to close accounts of branch for year to show profit on branch home office books.

Solution to Problem 36

			Debit	Credit
Branch A			$24,000.00	
Purchases				$20,000.00
Branch A, Contingent Profit				4,000.00
To record transfer of merchandise of $20,000 at 20% above cost.				
Branch A			6,250.00	
Branch A, Profit and Loss				6,250.00
For Sales		$30,000.00		
Less Inventory		15,000.00		
Gross Profit		$15,000.00		
Less:				
Expense	$8,000.00			
Bad Debts	750.00	8,750.00		
		$ 6,250.00		
To record operating result reported by Branch A.				
Branch A, Contingent Profit			1,500.00	
Branch A, Profit and Loss				1,500.00
For transfer the portion of contingent profit applicable to sales made by Branch A.				

Points Illustrated in Problem 36

(a) Controlling Account. The account with Branch A, which is kept on the books of the home office, is a controlling account which controls the branch ledger. A trial balance of the latter book should indicate a net debit or credit equal to the balance of the controlling account. (See Volume I, Chapter XXIV, § 13.)

(b) Deferred Credit. This is an illustration of the necessity for deferring the credit in the case of an income which is not actually earned during the period. The excess of the amount at which goods are billed to Branch A over the cost of the goods is credited to a contingent profit account instead of to Sales or a present profit. (See Volume IV, Chapter IV, § 6.)

Problem 37

A firm having several branches maintains an account with each branch in the ledger and charges to such account all goods sent to the agents for stock. When stock is taken the balance of each branch account is treated as ordinary accounts receivable, and is included in the general debts owing to the firm.

What objections are there to this method? If any, state how you would deal with the accounts.

(Ohio C. P. A. Examination.)

Solution to Problem 37

The objection to this method of bookkeeping is not that the inventory is overvalued, because, in the absence of information in the problem, we must assume that the stock was billed to the branch at cost. The objection is that the unsold stock on hand at the branch is an asset of a somewhat different character from an account receivable. The accounts receivable represent a completed turnover and an asset which includes an earned profit. Merchandise inventory, on the other hand, represents merely an investment which has not been turned over and on which the profit, if any, is yet to be realized. An account receivable is more liquid than merchandise inventory and thus it is advisable to state it separately in the accounts.

The accounts with each branch should be separate and distinct from the accounts receivable and should be marked in such a way as to indicate that they represent merchandise stock on hand at the branch for sale.

Points Illustrated in Problem 37

(a) Deferred Credit. This problem illustrates the deferring of a credit in the case of the shipment of goods to a branch. There can be no income until the goods have been actually sold. Accordingly, the credit upon the transfer of the merchandise to the branch should be to a temporary account and not to a Sales account. (See Volume IV, Chapter IV, § 5.)

(b) Inventory as an Asset. When merchandise is shipped from one branch to another, or from one warehouse to another, the value at which it is recorded on the books should not be increased, except possibly for the freight, cartage, and similar handling charges necessarily involved in the transfer. To bill a branch at a figure in excess of cost would be to anticipate a profit. (See Volume I, Chapter XI, § 13.)

(c) Intercompany Profits. Where one branch transfers merchandise to another at an increase over cost, a situation analogous to intercompany profits arises. Such interbranch, or interdepartment, or intercompany profits must be eliminated when the profit or loss of the business as a whole is sought. (See Volume IV, Chapter IV, § 6, and Chapter XXVIII, § 9.)

Problem 38

The Good Music Company sells pianos on the instalment plan. On January 2, 1914, Jones purchased a piano from the company for $375, to be paid as follows: $25 down and the balance in quarterly instalments of $50 each, bill of sale to be given on date of final payment. The piano cost the company $125. The first instalments for 1914 were duly received, the last one having been paid on December 31.

Required:

(a) Ledger accounts covering sale and payments thereon.

(b) Yearly closing journal entry to credit year with its proper proportion of the profit on this transaction.

(Wisconsin C. P. A. Examination.)

Solution to Problem 38

Jones

Jan. 2 Instalment Sales ...	$375.00	Jan. 2 Cash	$ 25.00
		Apr. 1 "	50.00
		July 1 "	50.00
		Oct. 1 "	50.00
		Dec. 31 "	50.00
		Dec. 31 Balance	150.00
	$375.00		$375.00
Jan. 1 Balance	$150.00		

Instalment Sales

Jan. 2 Sales	$ 25.00	Jan. 2 Jones	$375.00
Apr. 1 "	50.00		
July 1 "	50.00		
Oct. 1 "	50.00		
Dec. 31 "	50.00		
Dec. 31 Balance	150.00		
	$375.00		$375.00
		Jan. 1 Balance	$150.00

SALES

	Jan. 2	Instalment Sales ..	$ 25.00
	Apr. 1	" " ..	50.00
	July 1	" " ..	50.00
	Oct. 1	" " ..	50.00
	Dec. 31	" " ..	50.00
			$225.00

CASH

Jan. 2	Jones	$ 25.00	
Apr. 1	"	50.00	
July 1	"	50.00	
Oct. 1	"	50.00	
Dec. 31	"	50.00	
		$225.00	

Sales	$225.00	
Piano Purchase		$ 75.00
Profit and Loss		150.00
To credit Profit and Loss with 3/5 of $250.		

Points Illustrated in Problem 38

(a) Instalment Sales. The method of accounting for instalment sales is explained in Volume II, Chapter XVI, § 23.

(b) Deferred Credit. In this problem the profit on the instalment sale is recorded as earned only in the proportion that the cash collected bears to the total sale price. As the piano which cost $125 was sold for $375, a profit of $250 will result when the sale is finally paid for. Of the $375, however, only $225 has been collected. Accordingly, 225/375 or 3/5 of the profit of $250 is recorded as earned during the period. The rest of the profit is deferred as explained in Volume IV, Chapter IV, § 4.

Problem 39

On January 1, 1908, the condition of a small trading company was as follows:

Assets:		
Furniture and Fixtures	$2,000.00	
Cash	500.00	
Notes Receivable	3,000.00	
Accounts Receivable	5,000.00	
Merchandise on Hand	4,000.00	$14,500.00
Capital Stock and Liabilities:		
Capital Stock	$5,000.00	
Notes Payable	3,000.00	
Accounts Payable	6,000.00	
Surplus	500.00	$14,500.00

During the month of January, the bookkeeper made all entries in the cash book and in the sales book, but made no journal entries and did not post his ledger. In addition to the entries appearing in the cash book and on the sales book, the following transactions took place during January: merchandise purchases on credit amounting to $6,000; notes payable amounting to $6,000 renewed; special allowance of $500 made to customers.

The credit sales journal had two columns, one for the billed amounts and the other for the cost of the goods sold. The billed amount was $8,000, and the cost $5,000.

The following statement gives a summary of the cash receipts and disbursements for January:

Cash Received:		
Collected from Customers	$4,000.00	
Collected on Notes Receivable	2,000.00	
Collected on Merchandise Sold and not entered on sales book (cost $500)	600.00	$6,600.00

Cash Payments:		
Interest on Notes Payable	$ 45.00	
Salaries	500.00	
Rent	200.00	
Sundry Expenses	300.00	
Accounts Payable	5,000.00	$6,045.00

Prepare balance sheet, January 31, 1908, and statement of profit and loss, based on the book value of the merchandise.

(*Iowa C. P. A. Examination.*)

Solution to Problem 39

BALANCE SHEET

January 31, 1908

Assets

Furniture and Fixtures		$2,000.00	
Cash		1,055.00	
Notes Receivable		1,000.00	
Accounts Receivable		8,500.00	
Merchandise on Hand		4,500.00	
Total Assets			$17,055.00

Capital Stock and Liabilities

Capital Stock		$5,000.00	
Notes Payable		6,000.00	
Accounts Payable		4,000.00	
Surplus:			
Balance, January 1, 1908	$ 500.00		
Profit for January	1,555.00	2,055.00	
Total Liabilities			$17,055.00

SCHEDULES SHOWING DETERMINATION OF SUNDRY BALANCE SHEET ITEMS

Cash:			
Balance, January 1	$ 500.00		
Received	6,600.00	$ 7,100.00	
Paid		6,045.00	
Balance, January 31			$1,055.00
Notes Receivable:			
Balance, January 1		$ 3,000.00	
Collected		2,000.00	
Balance, January 31			$1,000.00
Accounts Receivable:			
Balance, January 1	$5,000.00		
Net Charge Sales	7,500.00	$12,500.00	
Received on Account		4,000.00	
Balance, January 31			$8,500.00
Accounts Payable:			
Balance, January 1	$6,000.00		
Purchases on Credit	6,000.00	$12,000.00	
Payments:			
By Cash	$5,000.00		
By Notes	3,000.00	8,000.00	
Balance, January 31			$4,000.00

The Notes Payable account shows a $3,000 balance on January 1, 1908, whereas the problem states that notes to the sum of $6,000 were renewed. It must be assumed that additional notes to the amount of $3,000 were given during January to trade creditors, and that, therefore, at January 31, 1908, the total amount of notes payable outstanding was $6,000, as stated in the above balance sheet.

PROFIT AND LOSS STATEMENT

For the Month of January, 1908

Gross Sales		$ 8,600.00	
Less—Allowances		500.00	
Net Sales			$8,100.00
Deduct—Cost of Goods Sold:			
Inventory, January 1, 1908	$4,000.00		
Add—Purchases	6,000.00	$10,000.00	
Less—Inventory, January 31, 1908		4,500.00	5,500.00
Gross Profit on Sales			$2,600.00
Deduct—Expenses:			
Salaries		$ 500.00	
Rent		200.00	
Sundry Expenses		300.00	1,000.00
Profit from Operations			$1,600.00
Deduct—Other Charges:			
Interest on Notes Payable			45.00
Net Profit			$1,555.00

The gross sales comprise $8,000 charge sales per sales book, and $600 cash sales per cash book.

The inventory as of January 31 is found by deducting from the sum of goods on hand January 1 and purchases for the month the cost of goods sold as found in the sales and cash books.

Points Illustrated in Problem 39

(a) Single-Entry Statements. The method of preparing statements from single-entry records and the points to be borne in mind in the determination of the financial condition and the profit or loss, are explained in Volume I, Chapter XXXV, § 7.

(b) Interest on Notes Payable. This interest is stated on the profit and loss statement as a deduction from the profit due to the operations of the business. The theory underlying this method of treatment is explained in Volume I, Chapter IX, § 11.

(c) Cost of Goods Sold. In this problem the cost of the goods sold is recorded daily by means of a price list or other record from which the information can be secured. Usually in a mercantile business the cost of goods sold is not exactly known until the end of a fiscal period, when it is calculated through the use of the closing inventory, as described in Volume I, Chapter IX, § 8. It is seldom that the keeping of a running inventory is practicable unless required by a cost system. (See Volume III.)

(d) Drawings by Proprietor. In this problem there were no drawings by the proprietor. This is an unusual situation because the usual practice is for the proprietor to withdraw cash from the business on account of the profits earned by it.

Problem 40

The firm of Gray and Green has insured the life of Gray for $50,000, the policy being payable to the firm. The annual premium is $989.60. The policy does not have a cash surrender value until the end of the third year; at that time the surrender value is $2,150.62; fourth year $2,862.20; fifth year $3,567.25. The premium is paid at the beginning of the year.

At the end of the fifth year Gray dies and the policy is paid to the firm in full.

Show by journal entries how the transactions pertaining to the above would be recorded.

Solution to Problem 40

The insurance policy may be capitalized on some conservative basis, instead of treating each year's premium as an expense, because, unlike fire insurance, there is being created an asset which can be realized upon either by the death of the assured or by the surrender of the policy.

The basis of capitalization is often the annual premiums paid to the insurance company, but a more conservative practice and one which is sound from an accounting standpoint is to capitalize the premiums at the cash surrender value of the policy, charging the difference between the premium and the increase in the cash surrender value to an expense account.

In the above case the policy has no cash surrender value until the third premium has been paid, which brings up the question as to how to treat the first three premiums. Such premiums may be charged to expense and the policy capitalized at its cash surrender value at the end of the third year, crediting at the same time the partners' capital accounts. This method is objectionable for the reason that there is an abrupt change in the amount of insurance expense after the third year and likewise the capital accounts are suddenly increased due to a condition which has been in effect for three years.

A better plan would seem to be to capitalize in each of the first three years, one-third of the cash surrender value of the policy at the end of that time, charging the difference between this value and the amount of the premium to expense; this method tends to equalize the amount of insurance expense during the time the policy is in force and also brings the policy on the books as an asset at the time it is taken out.

By this method, the following entries would be made:

First Payment:

Life Insurance Policy—Gray	$ 716.87	
Life Insurance Expense	272.73	
Cash		$ 989.60

Second and Third Payments:

Same entry as for the first.

Fourth Payment:

Life Insurance Policy—Gray	711.58	
Life Insurance Expense	278.02	
Cash		989.60

Fifth Payment:

Life Insurance Policy—Gray	705.05	
Life Insurance Expense	284.55	
Cash		989.60

End of Fifth Year:

Cash	50,000.00	
Life Insurance Policy—Gray		50,000.00
Received cash in settlement from insurance company.		
Life Insurance Policy—Gray	46,432.75	
Gray, Capital		23,216.38
Green, Capital		23,216.37
To credit to each partner's capital account the increase in capital resulting from the excess of the insurance received over the capitalized value of the policy at the time of Gray's death.		

Points Illustrated in Problem 40

(a) Deferred Debits. This problem illustrates the desirability of setting up deferred debits where expenditures of one period involve expense applicable to a subsequent one. This is explained in Volume IV, Chapter II. For an explanation of "expenditures" and their classification into capital and revenue expenditures, see Volume I, Chapter X, § 4.

(b) Adjustment of Capital. In this problem adjustment of the capital accounts is necessary in order to record the sudden acquisition of the life insurance cash. This sort of adjustment of capital where the increase does not result from current profits is explained in Volume IV, Chapter VII, § 4.

(c) Distribution of Profits. As stated in Volume I, Chapter XXXI, § 6, profits and losses in a partnership are distributed equally in the absence of an agreement. In this case, as there was no agreement, the distribution is in equal parts.

(d) Dissolution by Death. A partnership is dissolved upon the death of a partner unless there is some agreement binding upon his personal representatives. (See Volume I, Chapter XXXII, § 3.) Notwithstanding the death of partner Gray, his share of the life insurance policy is credited to his capital account. This is necessary because that account, when finally adjusted, will measure his interest in the firm business.

Problem 41

A company with head office in Chicago and factory at South Bend, Indiana, conducts three selling branches in New York, San Francisco, and Montreal, which are supplied with goods from the factory, the invoices being sent out from the head office.

The branches keep their own sales ledgers, send out monthly statements to customers, and receive cash against their ledger accounts, which they remit weekly to Chicago.

All branch expenses, including salaries and wages, are paid by the branches from petty cash accounts, kept at a fixed balance of $500, by draft on head office.

The following information is supplied by the branches at December 31, 1913, summarizing the transactions of the previous six months:

	New York	San Francisco	Montreal
Rent and Taxes Paid	$ 200.00	$ 175.00	$ 75.00
Sales for 6 mos. to Dec. 31, 1913	12,500.00	11,800.00	10,225.00
Salaries and Wages	1,650.00	1,520.00	1,600.00
Returned Sales	200.00	100.00	250.00
Allowances to Customers	50.00	40.00	30.00
Bad Debts		125.00	60.00
Cash Sales	6,250.00	5,380.00	6,100.00
Cash Received from Customers on Ledger Accounts	10,850.00	10,260.00	9,150.00
Debtors, July 1, 1913	5,820.00	6,140.00	7,240.00
Debtors, Dec. 31, 1913	7,220.00	7,415.00	7,975.00
Petty Cash, July 1, 1913	500.00	500.00	500.00
Petty Cash, Dec. 31, 1913	500.00	500.00	500.00
Stock, July 1, 1913	3,450.00	3,820.00	3,650.00
Stock, Dec. 31, 1913	4,300.00	4,720.00	4,500.00
Goods Received from Head Office Factory	11,500.00	10,240.00	10,350.00

Required:

(a) Branch accounts on head office books.
(b) Final general trial balance.
(c) Branch Profit and Loss accounts.

(Illinois C.P.A. Examination.)

Solution to Problem 41*

(a)

New York—Current Account

Balance, July 1, 1913:			Cash		$17,100.00
Debtors	$5,820.00		Balance, December 31, 1913:		
Petty Cash	500.00		Debtors	$7,220.00	
Stock	3,450.00	$ 9,770.00	Petty Cash	500.00	
Rent and Taxes		200.00	Stock	4,300.00	12,020.00
Salaries and Wages		1,650.00			
Goods from Factory		11,500.00			
Net Profit		6,000.00			
		$29,120.00			$29,120.00

San Francisco—Current Account

Balance, July 1, 1913:			Cash		$15,640.00
Debtors	$6,140.00		Balance, December 31, 1913:		
Petty Cash	500.00		Debtors	$7,415.00	
Stock	3,820.00	$10,460.00	Petty Cash	500.00	
Rent and Taxes		175.00	Stock	4,720.00	12,635.00
Salaries and Wages		1,520.00			
Goods from Factory		10,240.00			
Net Profit		5,880.00			
		$28,275.00			$28,275.00

Montreal—Current Account

Balance, July 1, 1913:			Cash		$15,250.00
Debtors	$7,240.00		Balance, December 31, 1913:		
Petty Cash	500.00		Debtors	$7,975.00	
Stock	3,650.00	$11,390.00	Petty Cash	500.00	
Rent and Taxes		75.00	Stock	4,500.00	12,975.00
Salaries and Wages		1,600.00			
Goods from Factory		10,350.00			
Net Profit		4,810.00			
		$28,225.00			$28,225.00

*Solution by D. Himmelblau, C. P. A.

(b)

A COMPANY

GENERAL TRIAL BAL

December

		Head Office*		New York	
		Dr.	Cr.	Dr.	Cr.
1	Investment in Branch Houses (July 1, 1913)	....	$ 30,120.00	....	....
2	New York—Current Account	$ 23,120.00	17,100.00	....	....
3	San Francisco—Current Account	22,395.00	15,640.00	....	....
4	Montreal—Current Account .	23,415.00	15,250.00	....	....
5	Factory	....	32,090.00	....	....
6	Cash	47,990.00	6,720.00	$17,100.00	$17,100.00
7	Petty Cash	....	....	2,350.00	1,850.00
8	Debtors	....	....	7,220.00	....
9	Stock (July 1, 1913)	....	....	3,450.00	....
10	Sales	....	....	....	18,750.00
11	Returned Sales	....	....	200.00	....
12	Allowances to Customers	....	....	50.00	....
13	Goods from Factory	....	....	11,500.00	....
14	Salaries and Wages	....	....	1,650.00	....
15	Rents and Taxes	....	....	200.00	....
16	Bad Debts	....	....	....	....
17	Head Office—Current Account	....	....	....	6,020.00
		$116,920.00	$116,920.00	$43,720.00	$43,720.00

*Consists of items indicated by the sales branch house transactions. Other general office or factory

AND BRANCHES

ANCE (BEFORE CLOSING)

31, 1913

	San Francisco		Montreal		Combined*	
	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.
1	....	....	....	....	....	$ 30,120.00
2	....	....	....	....	$ 6,020.00	....
3	....	....	....	....	6,755.00	....
4	....	....	....	....	8,165.00	....
5	....	....	....	....	....	32,090.00
6	$15,640.00	$15,640.00	$15,250.00	$15,250.00	41,270.00	....
7	2,195.00	1,695.00	2,175.00	1,675.00	1,500.00	....
8	7,415.00	....	7,975.00	....	22,610.00	....
9	3,820.00	....	3,650.00	....	10,920.00	....
10	....	17,180.00	....	16,325.00	....	52,255.00
11	100.00	....	250.00	....	550.00	....
12	40.00	....	30.00	....	120.00	....
13	10,240.00	....	10,350.00	....	32,090.00	....
14	1,520.00	....	1,600.00	....	4,770.00	....
15	175.00	....	75.00	....	450.00	....
16	125.00	....	60.00	....	185.00	....
17	....	6,755.00	....	8,165.00	....	20,940.00
	$41,270.00	$41,270.00	$41,415.00	$41,415.00	$135,405.00	$135,405.00

transactions would be included if data were available.

(c)

A COMPANY

STATEMENT OF PROFIT AND LOSS

For Six Months Ending December 31, 1913

	Total	New York	San Francisco	Montreal
Sales:				
On Account	$34,525.00	$12,500.00	$11,800.00	$10,225.00
Cash	17,730.00	6,250.00	5,380.00	6,100.00
Total Sales	$52,255.00	$18,750.00	$17,180.00	$16,325.00
Less—Returned Sales and Allowances	670.00	250.00	140.00	280.00
Net Sales	$51,585.00	$18,500.00	$17,040.00	$16,045.00
Cost of Sales:				
Inventory, July 1, 1913	$10,920.00	$ 3,450.00	$ 3,820.00	$ 3,650.00
Goods from Factory	32,090.00	11,500.00	10,240.00	10,350.00
	$43,010.00	$14,950.00	$14,060.00	$14,000.00
Less—Inventory, December 31, 1913	13,520.00	4,300.00	4,720.00	4,500.00
	$29,490.00	$10,650.00	$ 9,340.00	$ 9,500.00
Gross Sales Profit	$22,095.00	$ 7,850.00	$ 7,700.00	$ 6,545.00
Deduct—Expenses:				
Salaries and Wages	$ 4,770.00	$ 1,650.00	$ 1,520.00	$ 1,600.00
Rents and Taxes	450.00	200.00	175.00	75.00
Bad Debts	185.00	....	125.00	60.00
	$ 5,405.00	$ 1,850.00	$ 1,820.00	$ 1,735.00
Net Profit	$16,690.00	$ 6,000.00	$ 5,880.00	$ 4,810.00

Points Illustrated in Problem 41

(a) Analysis of Profit and Loss. As explained in Volume I, Chapter IX, § 1, the profit and loss should be analyzed in the way designed to give the best information for administrative control. Where there are branches it is obvious that the operating result of each branch must be known, because otherwise a branch might be operated at a loss without the facts being discovered.

(b) Controlling Account. This problem illustrates the use of the controlling account which in this case controls the accounts at each branch. The theory underlying the controlling account and the rules governing its use are explained in Volume I, Chapter XXIV.

(c) Deferred Credit. The method of deferring credits where income will not be earned until succeeding periods is illustrated in this problem. The goods received by the branch from the factory should be handled at cost and not at an increased value. There can be no profit on such goods until they have been sold. (See Volume IV, Chapter III, § 5.)

Problem 42

A corporation desires to close its books on December 31, 1919; on January 15, 1920, an accountant is called in to make an audit of the accounts for the year, make all necessary adjustments, and check up the financial statements.

The accountant discovers that the following accrued and prepaid items were ignored by the bookkeeper at the time of closing the books on June 30, 1919, the date of the preceding closing, and also at December 31, 1919, when he had prepared tentative closing entries:

	June 30, 1919	Dec. 31, 1919
Overstatement of Inventory	$1,850.00	
Interest Prepaid on Notes Payable	375.00	$ 150.00
Wages Accrued	1,957.00	3,984.00
Insurance Premiums Prepaid	290.00	680.00
Interest Accrued on Bonds	500.00	500.00
Taxes Accrued	600.00	
Taxes Prepaid		500.00

Make the necessary adjusting entries.

Solution to Problem 42

ADJUSTMENTS

December 31, 1919

Surplus	$1,850.00	
Profit and Loss		$1,850.00
To charge Surplus with amount of inventory overstated as of June 30, 1919.		
Interest Prepaid on Notes Payable	150.00	
Profit and Loss	225.00	
Surplus		375.00
To set up interest prepaid at December 31, 1919, as an asset, and to credit Surplus with amount of interest prepaid on June 30, 1919.		
Profit and Loss	2,027.00	
Surplus	1,957.00	
Wages Accrued		3,984.00
To set up the liability for wages accrued December 31, 1919, and to charge Surplus with wages accrued June 30, 1919.		
Insurance Premiums Prepaid	680.00	
Profit and Loss		390.00
Surplus		290.00
To set up insurance prepaid at December 31, 1919, as an asset, and to credit Surplus with insurance prepaid as of June 30, 1919.		

Taxes Prepaid	$500.00	
Surplus	600.00	
Profit and Loss		$1,100.00
To set up taxes prepaid as at December 31, 1919, as an asset, and to charge Surplus with taxes accrued as of June 30, 1919.		
Surplus	500.00	
Interest Accrued on Bonds		500.00
To record the liability for interest on bonds accrued December 31, 1919, and to charge Surplus with bond interest accrued as of June 30, 1919.		

Points Illustrated in Problem 42

(a) Accrued Expenses. The necessity of accruing all expenses applicable to the period under review is explained in Volume IV, Chapter III, § 2.

(b) Deferred Expenses. In Volume I, Chapter VI, § 10, the desirability of recording all deferred charges or prepaid expenses is discussed.

(c) Surplus Adjustments. The principles underlying the adjustment of surplus to record errors prior to the last preceding closing of the books is explained in Volume I, Chapter XIV, § 9, and in Volume IV, Chapter VII, § 3.

Problem 43

John Adams lost his stock of merchandise, May 1, 1914, through a flood in the Mississippi River.

Adams applied to the local Mutual Flood Insurance Society for reimbursements, claiming a loss of $5,886.35 on merchandise stock. From the following data ascertain his merchandise inventory:

Net profits, May 1, 1914, $4,452.91; drawings $1,598; legal expenses $17.50; interest debit $313; advertising $14; commissions, debit $961.01; insurance $196.23; sales $81,688.04; inventory, December, 1911, $1,568.62; purchases $55,415.82; labor, productive $19,499.58; telephone $416.06; sundry factory expenses $3,201.92; repairs $16; surplus, May 1, 1914, $2,854.91.

(*New York C. P. A. Examination.*)

Solution to Problem 43*

(I)

Establishment of Gross Profit on Sales for Purposes of Ascertaining Inventory

Net Profit, per Profit and Loss account		$ 4,452.91
Add:		
Administration Expense, and Income Deductions:		
Legal Expense	$ 17.50	
Interest Charges	313.00	
Insurance	196.23	
Telephone	416.06	
Total		942.79
Selling Profit		$ 5,395.70
Add:		
Selling Expense:		
Advertising	$ 14.00	
Commissions	961.01	
Total		975.01
Gross Profit on Sales		$ 6,370.71

*Solution by P.-J. Esquerré, C. P. A.

(II)

Establishment of Closing Inventory

Income from Sales	$81,688.04	
Less—Gross Profit on Sales	6,370.71	
Cost of Goods Sold		$75,317.33
Cost of Goods Manufactured:		
Initial Inventory, December, 1911	$ 1,568.62	
Purchases of the period	55,415.82	
Productive Labor	19,499.58	
Factory Expense	3,201.92	
Repairs	16.00	
Total		79,701.94
Remainder, Cost of Goods Unsold, i.e., Inventory of Finished Goods at time of flood		$ 4,384.61

(III)

Reconstruction of Statement of Income

Income from Sales		$81,688.04
Cost of Goods Sold:		
Initial Inventory, December, 1911	$ 1,568.62	
Purchases	55,415.82	
Productive Labor	19,499.58	
Factory Expense	3,201.92	
Repairs	16.00	
	$79,701.94	
Deduct—Inventory, May 1, 1914	4,384.61	
Cost of Goods Sold		75,317.33
Gross Profit on Sales		$ 6,370.71
Selling Expense:		
Advertising	$ 14.00	
Commissions	961.01	
Total		975.01
Selling Profit		$ 5,395.70

Administration Expense:		
Legal Expense	$ 17.50	
Interest Charges	313.00	
Insurance	196.23	
Telephone	416.06	
Total		942.79
Net Profit		$ 4,452.91

(IV)

VALIDITY OF CLAIM FOR FLOOD LOSS

Inventory Claimed	$ 5,886.35	
Actual Inventory	4,384.61	
Excess of Claim over Loss		$ 1,501.74

Points Illustrated in Problem 43

(a) Estimating of Inventory. In Volume I, Chapter XVIII, § 8, and in Volume IV, Chapter XX, § 7, will be found discussions of the method by which inventories are usually estimated between stock-taking times.

(b) Cost of Goods Sold. This problem illustrates some of the principal elements of the cost of goods sold. For others see Volume I, Chapter IX, § 8.

Problem 44

You are instructed to make an examination of a business for the purpose of preparing a statement of assets and liabilities as of December 31, 1913. The inventory was taken on January 10, 1914, and amounted at that time to $7,689.25. The sales billed between December 31 and January 10 amounted to $945, but you discover that $300 worth of these goods had been shipped, and therefore should have been billed, before December 31. The goods received between December 31 and January 10 cost $678.25. The average gross profit of this concern is 25% above cost.

Calculate the inventory as of December 31.

(*Massachusetts C. P. A. Examination.*)

Solution to Problem 44*

Sales billed January 1 to January 10, 1914	$ 945.00
Less—Portion of goods shipped before January 1	300.00
Shipments since January 1, at selling price	$ 645.00
Cost of shipments: $645 divided by 1.25	$ 516.00
Actual inventory, January 10	$7,689.25
Deduct—Purchases, January 1 to January 10	678.25
	$7,011.00
Add—Shipments, January 1 to January 10, at cost	516.00
Inventory, December 31, 1913	$7,527.00

NOTE: $300 for goods shipped but not billed, as shown by books on December 31, should be added to accounts receivable.

Points Illustrated in Problem 44

(a) Calculation of Inventory. This problem illustrates the calculation or estimating of inventories. This matter is discussed in Volume I, Chapter XVIII, § 8, and in Volume IV, Chapter XX, § 7.

(b) Percentage of Gross Profit. It will be noted that in this problem the gross profit is calculated on the cost of the goods sold instead of on the selling price. The latter method is more commonly used as explained in Volume IV, Chapter XXX, § 5.

*Solution by Hazen P. Philbrick, C. P. A.

Problem 45

The books of the X Manufacturing Company were audited to December 31, 1913, and in making up the balance sheet and the profit and loss account at that date the auditors recommended the following adjustments:

1. Transferred to Profit and Loss, $4,231.07, which had been charged to real estate and buildings in error.
2. Provided for depreciation of buildings, etc., $7,200.
3. Adjusted salaries amounting to $1,400, due for 1913 services but not entered on the books until January, 1914.
4. Reduced the amount of inventory because of errors, $12,000.

The same auditors were again called in to audit the books to June 30, 1914, and found that the above adjustments had not been entered in the books. They also found that during the half-year $1,000 had been charged to real estate, buildings, etc., instead of to expense; that no provision had been made for depreciation for the period, amounting to $3,600, and that the inventory had been footed $10,000 too much. Also that the unexpired insurance amounted to $750 more than was entered on the books.

The following are condensed trial balances of the X Manufacturing Company books as the auditor found them as of December 31, 1913, and June 30, 1914:

	December 31, 1913		June 30, 1914	
Real Estate, Buildings, etc.	$102,840.26	....	$115,226.80	....
Capital Stock	....	$200,000.00	....	$200,000.00
Debentures	....	100,000.00	....	100,000.00
Cash	14,672.14	....	22,143.21	....
Accounts Payable	....	9,431.17	....	11,698.21
Accounts Receivable	22,436.10	....	28,250.40	....
Loans	....	10,000.00	....	5,000.00
Stocks and Bonds	17,502.50	....	19,150.00	....
Inventory	246,153.42	....	288,360.14	....
Unexpired Insurance	1,471.23	....	742.26	....
Surplus	....	85,644.48	....	85,644.48
Profit and Loss, 1914	....	....	....	71,530.12
	$405,075.65	$405,075.65	$473,872.81	$473,872.81

From the above facts prepare:

(a) A correct balance sheet, June 30, 1914.

(b) State the adjusted amount of profits for the half-year to June 30, 1914.

(c) Prepare statement reconciling the balance sheet figures with the original trial balance of June 30, 1914.

(*Massachusetts C. P. A. Examination.*)

Solution to Problem 45*

(a)

BALANCE SHEET

June 30, 1914

Assets

Cash	$ 22,143.21
Accounts Receivable	28,250.40

*Solution by Hazen P. Philbrick, C. P. A.

Inventories		278,360.14	
Total Current Assets			$328,753.75
Stocks and Bonds			19,150.00
Real Estate and Buildings		$109,995.73	
Less—Reserve for Depreciation thereon		10,800.00	99,195.73
Unexpired Insurance			1,492.26
			$448,591.74

Liabilities and Net Worth

Accounts Payable		$ 11,698.21	
Loans		5,000.00	
Total Current Liabilities			$ 16,698.21
Debentures			100,000.00
Total Liabilities			$116,698.21
Capital Stock		$200,000.00	
Surplus:			
Balance, January 1, 1914	$60,813.41		
Gain, 6 months to June 30	71,080.12		
Balance, June 30, 1914		131,893.53	
Net Worth			331,893.53
			$448,591.74

(b)

Adjusted amount of profits for half-year to June 30, 1914	$ 71,080.12

(c)

In making up this reconciliation table, the four adjustments for June 30, 1914, have been assigned, respectively, the numbers (5), (6), (7), and (8), corresponding to the numbers (1), (2), (3), and (4), assigned in the statement of the problem to the four adjustments for December 31, 1913.

The three answers required are, of course, obtained in the reverse order, (c), (b), and (a).

RECONCILIATION TABLE

June 30, 1914

	Trial Balance per Books		Adjustments		Balance Sheet	
	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.
Real Estate and Buildings	$115,226.80			(1) $ 4,231.07 (5) 1,000.00	$109,995.73	
Capital Stock		$200,000.00				$200,000.00
Debentures		100,000.00				100,000.00
Cash	22,143.21				22,143.21	
Accounts Payable		11,698.21				11,698.21
Accounts Receivable	28,250.40				28,250.40	
Loans		5,000.00				5,000.00
Stocks and Bonds	19,150.00				19,150.00	
Inventory	288,360.14			(7) 10,000.00	278,360.14	
Unexpired Insurance	742.26		(8) $ 750.00		1,492.26	
Surplus		85,644.48	(1) 4,231.07 (2) 7,200.00 (3) 1,400.00 (4) 12,000.00			60,813.41
Profit and Loss		71,530.12	(5) 1,000.00 (6) 3,600.00 (7) 10,000.00	(3) 1,400.00 (4) 12,000.00 (8) 750.00		71,080.12
Reserve for Depreciation of Real Estate and Buildings				(2) 7,200.00 (6) 3,600.00		10,800.00
	$473,872.81	$473,872.81	$40,181.07	$40,181.07	$459,391.74	$459,391.74

Points Illustrated in Problem 45

(a) Surplus Adjustments. In Volume IV, Chapter VII, § 4, the necessity for recording surplus adjustments when corrections applicable to prior periods are made is discussed.

(b) Capital and Revenue Expenditures. This problem illustrates the distinction between capital and revenue expenditures as explained in Volume I, Chapter X, § 4. An expenditure is a payment or an obligation to pay for something, and a capital expenditure is one which results in the acquisition of a fixed asset. All other expenditures are revenue expenditures.

(c) Depreciation. The theory underlying depreciation and the means of recording it are explained in Volume I, Chapter XXIX, and in Volume IV, Chapter XII.

(d) Accrued Liabilities. In Volume IV, Chapter III, § 1, the necessity for recording accrued liabilities is explained.

(e) Deferred Charges. Setting up deferred charges, as was done in this problem, is required if the exact operating result for the current fiscal period is sought. This matter is covered in Volume IV, Chapter II.

(f) Adjusting Entries. In this problem a number of adjusting entries are necessary prior to the closing of the nominal accounts. These entries are made in accordance with the suggestions outlined in Volume I, Chapter VIII, § 2.

(g) Real Estate and Buildings. It is preferable to have a separate account for buildings in order that the depreciation on them may be more exactly calculated. In this problem real estate and buildings are covered by one account, which is not considered best practice. (See Volume IV, Chapter XVII, § 4.)

(h) Tie-Up of Statements. This problem illustrates the tying up of the balance sheet and the statement of profit and loss in order that each may support the other. This is advisable, as suggested in Volume IV, Chapter XXI, § 13.

(i) Debentures. A description of the usual kinds of bonds issued and the accounting treatment required to record them is given in Volume IV, Chapter IX.

Problem 46

Following is a transcript of the Surplus account of a company covering the years 1918 to 1920.

Credits

Dec. 31, 1918	Net Profit	$129,600.00
Dec. 31, 1919	Net Profit	110,000.00
June 30, 1919	Adjustment of Inventory	2,000.00
Dec. 31, 1920	Net Profit	118,000.00

Debits

Jan. 15, 1918	Dividend	$ 20,000.00
July 15, 1918	Dividend	20,000.00
Jan. 15, 1919	Dividend	20,000.00
July 15, 1919	Dividend	20,000.00
Dec. 31, 1919	Good-Will reduced	100,000.00
Jan. 15, 1920	Dividend	20,000.00
July 15, 1920	Dividend	20,000.00

Early in 1920, accountants are called in to make an examination of the books and to estimate the amount of federal income tax which the company will pay. They discover the following:

1. No depreciation on the machinery was written off in 1918. They reckon the depreciation for this year to be $5,000.
2. Error in inventory of December 31, 1918, of $1,000 too much, which was never corrected.
3. Wages accrued as of December 31, 1919, estimated to be $3,000, were ignored.
4. Insurance premiums prepaid of $500 as of December 31, 1919, ignored.
5. Error in inventory of December 31, 1920, resulting in the inventory being $2,000 less than it should have been.

6. A patent costing $5,000 was charged to manufacturing expenses in 1920.
7. Insurance prepaid as of December 31, 1920, of $300 not shown on the books.
8. A Suspense account with a debit balance of $130 representing unlocated errors in trial balances to be closed out.

You are required to make adjusting entries for the above and to set up an entirely new Surplus account for the three years, embodying all adjustments, and balance the account as of December 31, each year, carrying forward the balance to the following year.

Solution to Problem 46

ADJUSTING ENTRIES

(1)		
Surplus, 1918	$5,000.00	
Reserve for Depreciation of Machinery		$5,000.00
(2)		
Surplus, 1918	1,000.00	
Surplus, 1919		1,000.00
(3)		
Surplus, 1919	3,000.00	
Surplus, 1920		3,000.00
(4)		
Surplus, 1920	500.00	
Surplus, 1919		500.00
(5)		
Inventory	2,000.00	
Surplus, 1920		2,000.00

(6)

Patents	5,000.00	
Surplus, 1920		5,000.00

(7)

Insurance Prepaid	300.00	
Surplus, 1920		300.00

(8)

Surplus, 1920	130.00	
Suspense Account		130.00

Revised Surplus Account

1918			1918		
Jan. 15	Dividend	$ 20,000,00	Dec. 31	Net Profit	$129,600.00
July 15	Dividend	20.000.00			
Dec. 31	Depreciation (1)	5,000.00			
	Adj. of Inventory (2)	1,000.00			
	Balance	83,600.00			
		$129,600.00			$129,600.00
1919			1919		
Jan. 15	Dividend	$ 20,000.00	Jan. 1	Balance	$ 83,600.00
July 15	Dividend	20,000.00		Adj. of Inventory (2)	1,000.00
Dec. 31	Good-will	100,000.00	June 30	Adj. of Inventory	2,000.00
	Wages (3)	3,000.00	Dec. 31	Net Profit	110,000.00
	Balance	54,100.00	Dec. 31	Adj. of Insurance (4)	500.00
		$197,100.00			$197,100.00
1920			1920		
Jan. 1	Adj. of Insurance (4)	$ 500.00	Jan. 1	Balance	$ 54,100.00
Jan. 15	Dividend	20,000.00		Adj. of Wages (3)	3,000.00
July 15	Dividend	20,000.00	Dec. 31	Net Profit	118,000.00
Dec. 31	Suspense (8)	130.00		Adj. of Inventory (5)	2,000.00
	Balance	141,770.00		Patent (6)	5,000.00
				Insurance (7)	300.00
		$182,400.00			$182,400.00
			1921		
			Jan. 1	Balance	$141,770.00

Points Illustrated in Problem 46

(a) Surplus Adjustments. In this problem the adjustment of surplus is comparatively simple because a separate Surplus account for each year is required. The necessity of adjusting surplus for corrections such as those in this problem is discussed in Volume IV, Chapter VII, § 4.

(b) Deferred Charges. The accounting necessity for recording deferred charges where expenses apply to succeeding periods is covered in Volume IV, Chapter II.

(c) Accrued Liabilities. As outlined in Volume IV, Chapter III, § 1, all accrued liabilities should be recorded in order that the financial condition of the business may be exactly shown.

(d) Dividends. The nature of dividends which are distributions of profit and not expenses is described in Volume IV, Chapter V. This problem illustrates the procedure in recording them. It will be noted that they are charged against Surplus and not against Profit and Loss.

(e) Cost of Patents. The principles underlying the valuation of patents are explained in Volume IV, Chapter XIX, § 10. There is no information in this problem with which to check the correctness of the valuation placed upon the patent.

(f) Trial Balance Errors. The unlocated errors in the trial balance, the net result of which was carried in a suspense account, should have been located if practicable. The necessity for locating such errors and suggestions as to the most expeditious procedure are explained in Volume IV, Chapter XXXI.

Problem 47

A and B were partners, trading under the name of A, B and Company. June 30, 1920, the following balances appear on their ledger:

A, Capital	$70,000.00
B, Capital	50,000.00
Real Estate	22,000.00
Buildings	20,000.00
Machinery and Tools	44,000.00
Furniture and Fixtures	2,000.00
Accounts Receivable	50,000.00
Cash	7,000.00
Materials and Merchandise	53,000.00
Accounts Payable	35,000.00
Notes Payable	48,000.00
Notes Receivable	5,000.00

On June 30, 1920, the business is incorporated as the X Company, on the following plan:

1. Capital stock, $150,000.

2. X Company takes over the entire assets and liabilities of A, B and Company at the book figures as above, except (a) real estate of the book value of $5,000, which is retained by A, B and Company; (b) the accounts receivable, which are taken over at $48,000; and (c) the capital accounts of the partners.

3. X Company pays A, B and Company $30,000 for the good-will of the business.

4. Payments to A, B and Company are made as follows, viz.: $50,000 in first mortagage bonds, and the balance in capital stock of the X Company.

5. After paying off A, B and Company the remainder of the capital stock is sold for cash to sundry persons.

The real estate which is retained by A, B and Company is bought from A, B and Company by A, for $7,000 and is charged to A's capital account.

After the conclusion of the foregoing described transactions A and B dissolve partnership.

You are required:

(a) To prepare closing entries for the books of A, B and Company.

(b) A statement setting forth the partners' accounts down to their final closing, beginning with the balances shown by the books on June 30, 1920.

(c) Opening entries for the X Company.

Solution to Problem 47

(a)

A, B AND COMPANY

LEDGER BALANCES

June 30, 1920

Cash	$ 7,000.00	
Accounts Receivable	50,000.00	
Notes Receivable	5,000.00	
Materials and Merchandise	53,000.00	
Real Estate	22,000.00	
Buildings	20,000.00	
Machinery and Tools	44,000.00	
Furniture and Fixtures	2,000.00	
Accounts Payable		$ 35,000.00
Notes Payable		48,000.00
A, Capital		70,000.00
B, Capital		50,000.00
	$203,000.00	$203,000.00

JOURNAL ENTRIES OF A, B AND COMPANY

June 30, 1920

Good-Will	$ 30,000.00	
A, Capital		$ 15,000.00
B, Capital		15,000.00
To bring good-will on the partnership books as valued, same being divided equally between partners.		

Profit and Loss	2,000.00	
Accounts Receivable		2,000.00
To provide for estimated loss on account of bad debts.		
X Company	226,000.00	
Cash		7,000.00
Accounts Receivable		48,000.00
Notes Receivable		5,000.00
Materials and Merchandise		53,000.00
Real Estate		17,000.00
Buildings		20,000.00
Machinery and Tools		44,000.00
Furniture and Fixtures		2,000.00
Good-Will		30,000.00
To show sale of assets to the X Company.		
Accounts Payable	35,000.00	
Notes Payable	48,000.00	
X Company		83,000.00
To record transfer of liabilities assumed by the X Company.		
First Mortgage Bonds—X Company	50,000.00	
Capital Stock—X Company	93,000.00	
X Company		143,000.00
Received from the X Company in exchange for the partnership business.		
A, Capital	7,000.00	
Real Estate		5,000.00
Profit and Loss		2,000.00
To show sale to A of real estate of the book value of $5,000, realizing a profit of $2,000 therefrom.		
A, Capital	25,000.00	
B, Capital	25,000.00	
First Mortgage Bonds		50,000.00
A, Capital	53,000.00	
B, Capital	40,000.00	
Capital Stock—X Company		93,000.00
To show transfer to the individual partners of the bonds and capital stock of the X Company. This closes all partnership accounts.		

STATEMENT OF PARTNERS' ACCOUNTS—A

Balance, June 30, 1920		$ 70,000.00
Share of Good-Will (50%)		15,000.00
Share of Loss on Bad Debts	$ 1,000.00	
Share of Profit on Sale of Real Estate		1,000.00
Purchase of Real Estate	7,000.00	
First Mortgage Bonds—X Company	25,000.00	
Capital Stock—X Company	53,000.00	
	$ 86,000.00	$ 86,000.00

STATEMENT OF PARTNERS' ACCOUNTS—B

Balance, June 30, 1920		$ 50,000.00
Share of Good-Will (50%)		15,000.00
Share of Loss on Bad Debts	$ 1,000.00	
Share of Profit on Sale of Real Estate		1,000.00
First Mortgage Bonds—X Company	25,000.00	
Capital Stock—X Company	40,000.00	
	$ 66,000.00	$ 66,000.00

OPENING ENTRIES OF X COMPANY

June 30, 1920

The X Company has been incorporated this day with an authorized capital stock of $150,000, divided into 1,500 shares of the par value of $100 each.

Cash	$ 7,000.00	
Accounts Receivable	48,000.00	
Notes Receivable	5,000.00	
Materials and Merchandise	53,000.00	
Real Estate	17,000.00	
Buildings	20,000.00	
Machinery and Tools	44,000.00	
Furniture and Fixtures	2,000.00	
Good-Will	30,000.00	
A, B and Company		$226,000.00
To bring onto the books the assets acquired from A, B and Company.		

A, B and Company	83,000.00	
Accounts Payable		35,000.00
Notes Payable		48,000.00
To bring onto the books the liabilities of A, B and Company assumed by the new corporation.		
A, B and Company	143,000.00	
First Mortgage Bonds		50,000.00
Capital Stock		93,000.00
To show the issue to A, B and Company of first mortgage bonds and 930 shares of capital stock, at par, in exchange for the business formerly conducted by them.		
Cash	57,000.00	
Capital Stock		57,000.00
Balance of the capital stock (570 shares) has been sold for cash.		

Points Illustrated in Problem 47

(a) Distribution of Profits. As explained in Volume I, Chapter XXXI, § 6, profits are divisible equally among the partners in the absence of an agreement. This is illustrated by this problem where the capital accounts are not equal in amount. The rule of law is based on the fact that the relative values of partners to a business cannot be determined and if the partners do not agree upon any basis for the distribution of profits the law presumes that the partners are of equal value to the business.

(b) Closing of Partnership Books. This problem illustrates the closing of all partnership accounts upon dissolution of the firm. The points to be covered in the preparation of the necessary entries are explained in Volume I, Chapter XXXII, § 10.

(c) Good-Will upon Dissolution. The principles underlying the creation of good-will upon the dissolution of a partnership and the distribution of it among the partners are explained in Volume I, Chapter XXXII, § 10. This problem illustrates such good-will and the bookkeeping entries necessary to record it.

(d) Opening Entry for Corporation. The entries necessary to open the books of a corporation are explained in Volume I, Chapter XXXIII, § 8.

(e) Bond Issue. In Volume IV, Chapter X, § 8, the principles underlying the issue of bonds by a corporation and the recording of the issue on the corporate books are discussed.

Problem 48

The present value of an annuity of $1 for four periods at 2% is $3.80772870.

What is the value on January 1, 1914, of a 5% per annum bond issue of $100,000, bought on a 4% per annum basis (semiannual coupons), due January 1, 1916?

Prepare amortization table as follows:

Date	Total Interest 2½%	Income 2%	Amortization	Book Value	Par $100,000.00
Jan. 1, 1914					
July 1, 1914					
Jan. 1, 1915					
July 1, 1915					
Jan. 1, 1916					

Insert values under the various heads to the nearest cent.

(Kansas and Missouri C. P. A. Examinations.)

Solution to Problem 48

These bonds yield an effective rate of 4% per annum. If the coupons also were 4%, the bonds would be worth exactly \$100,000. Since the coupons are 5%, the amounts to be valued (in order to find the excess value above \$100,000) are the present worths on a 4% basis (interest payable semiannually) of the difference between \$2,000 and \$2,500. In other words, we have to find the present worth of an annuity of \$500 for four periods at 2% per period. Using the data given in the first paragraph of the problem, we find this present worth to be \$1,903.86. This amount added to \$100,000 gives \$101,903.86 as the required value of the bonds on January 1, 1914.

The amortization table asked for is as follows:

Date	Total Coupon Receipts at 2½%	Income at 2%	Amortization	Book Value	Par Value
Jan. 1, 1914 ..	....	....	....	\$101,903.86	\$100,000.00
July 1, 1914 ..	\$ 2,500.00	\$2,038.08	\$ 461.92	101,441.94	....
Jan. 1, 1915 ..	2,500.00	2,028.84	471.16	100,970.78	....
uly 1, 1915 ..	2,500.00	2,019.42	480.58	100,490.20	....
Jan. 1, 1916 ..	2,500.00	2,009.80	490.20	100,000.00	....
Total ...	\$10,000.00	\$8,096.14	\$1,903.86		

Points Illustrated in Problem 48

(a) Annuities. The theory of annuities is explained in Volume IV, Chapter XI, and this problem illustrates one of the simpler phases of elementary actuarial science.

(b) Effective Interest. The distinction between nominal interest and effective interest on bonds and the necessity for recording accurately the effective interest are explained in Volume IV, Chapter IX, § 5.

(c) Amortization. The theory of amortization and the procedure for recording it are explained in Volume IV, Chapter IX, § 6.

Problem 49

You are engaged in auditing the accounts of a corporation for the calendar year 1914 and find on the ledger an account with the Short Line Railroad bonds, which was charged on April 1, 1912, with $110,072.42 as the cost of $100,000 first mortgage bonds, payable January 1, 1917, and bearing interest at 6% payable January 1 and July 1 of each year.

You observe that no part of the premium has been charged off, and on investigation you find the following credits were made to Interest on Investments for the interest received on the bonds: July 10, 1912, $3,000; January 8, 1913, $3,000; July 9, 1913, $3,000; January 12, 1914, $3,000; July 10, 1914, $3,000.

You are informed that these bonds were purchased on a 4%, semiannual basis. Possessed of this information you are required to prepare a schedule showing the book value of the bonds April 1, 1912, and July 1 and January 1 of each year; the interest received; the income and the amortization for each period on the basis on which the bonds were purchased; the conventional method being used for the initial fractional period, so as to furnish necessary information for making future entries as to income and amortization. From this data you are to submit the necessary journal entries to adjust the accounts to December 31, 1914.

(Ohio C. P. A. Examination.)

Solution to Problem 49*

The schedule of amortization which follows has been set up by the reverse of the usual procedure, that is by working backwards, and obtaining each value from the next later by addition and division.

Thus, beginning at maturity with par	$100,000.00
and adding to it the coupon then due	3,000.00
	$103,000.00
Then discounting this by dividing by 1.02, which gives	$100,980.39
namely, the value one period before maturity.	
To obtain the next value add the coupon next before the last..............................	3,000.00
	$103,980.39
and divide again by 1.02, giving the next previous value	$101,941.56
and by proceeding in like manner successive terms may be obtained as far as desired.	

On April 1, 1912, when the bonds were bought, midway between interest-paying dates, the divisor is 1.01. Thus, $110,072.42, the cost of the bonds, divided by 1.01 gives the book value of these bonds on January 1, 1912, as $108,982.59, which with accrued interest amounts to $110,072.42, i.e., the *flat* price inclusive of interest.

In other words, to the book value on January 1, 1912	$108,982.59
add simple interest at 4% for three months	1,089.83
giving the flat price (with interest included)......	$110,072.42

*Solution by W. P. Kohr, C. P. A.

"This practice of adjusting the price at intermediate dates by simple interest is conventionally correct, but is scientifically inaccurate, and always works a slight injustice to the buyer. The seller is having his interest compounded at the end of two* months instead of six months, and receives a benefit therefrom at the expense of the buyer."†

SCHEDULE OF AMORTIZATION

6% Bonds of the Short Line Railroad Company payable January 1, 1917. Purchased April 1, 1912, at $108,572.42 and Accrued Interest.

J1-J1

Year	Date	Total Interest 6%	Net Income 4%	Amortization	Book Value	Par Value
1917	Jan. 1	$ 3,000.00	$ 2,019.61	$ 980.39	$100,000.00	$100,000.00
1916	July 1	3,000.00	2,038.83	961.17	100,980.39	....
	Jan. 1	3,000.00	2,057.68	942.32	101,941.56	....
1915	July 1	3,000.00	2,076.15	923.85	102,883.88	....
	Jan. 1	3,000.00	2,094.27	905.73	103,807.73	....
1914	July 1	3,000.00	2,112.01	887.99	104,713.46	....
	Jan. 1	3,000.00	2,129.45	870.55	105,601.45	....
1913	July 1	3,000.00	2,146.51	853.49	106,472.00	....
	Jan. 1	3,000.00	2,163.25	836.75	107,325.49	....
1912	July 1	3,000.00	2,179.65	410.18	108,162.24	....
	Apr. 1	....	....	410.17	108,572.42	....
	Jan. 1	....	....	....	108,982.59	....
		$30,000.00	$21,017.41	$8,982.59	....	....

*In the problem stated herewith, the interest for the intermediate period is, of course, for three months.

†"The Accountancy of Investment," by Sprague and Perrine, page 96.

ADJUSTING JOURNAL ENTRIES

December 31, 1914

Prior Surplus Adjustment	$1,500.00	
Bond Premium (Short Line 6's)	8,572.42	
Bonds (Short Line 6's)		$10,072.42
To set up premium on Short Line R.R. 6's as of date of purchase, April 1, 1912, and to charge "Prior Surplus Adjustment" with accrued interest paid on that date and included in purchase price, which latter was received July 10, 1912, and was credited to "Interest on Investments."		
Prior Surplus Adjustment	2,970.97	
Bond Premium (Short Line 6's)		2,970.97
To charge "Prior Surplus Adjustment" and write down the premium account with the amortization of the premium included in former accounting periods in the credits to "Interest on Investments," as follows:		

June 30, 1912 ..	$ 410.18	See Schedule of Amortization
Dec. 31, 1912 ..	836.75	
June 30, 1913 ..	853.49	
Dec. 31, 1913 ..	870.55	
	$2,970.97	

Interest on Investments	3,000.00	
Prior Surplus Adjustment		3,000.00
To charge "Interest on Investments" with 6% interest received on Short Line 6's January 12 1914, applicable to the year 1913.		
Interest on Investments	887.99	
Bond Premium (Short Line 6's)		887.99
To charge "Interest on Investments" and write down the premium account with the amortization of the premium, per Schedule, included in the credit during current year to "Interest on Investments" as follows:		
June 30, 1913 ....$887.99		

Bond Interest Receivable	3,000.00	
Interest on Investments		2,094.27
Bond Premium (Short Line 6's)		905.73
To set up value of accrued interest to December 31, 1914, and credit Income and Bond Premium accounts, according to the Schedule of Amortization.		
Interest on Investments	4,206.28	
Profit and Loss		4,206.28
To close.		

Points Illustrated in Problem 49

(a) Surplus Adjustments. The adjustments of surplus in this problem are in accordance with the procedure laid down in Volume IV, Chapter VII, § 4.

(b) Bond Investments. The accounting procedure required to record bond investments and the income therefrom is outlined in Volume IV, Chapter X.

(c) Effective Interest. In Volume IV, Chapter IX, § 5, the distinction between effective interest and nominal interest is pointed out clearly and the accounting procedure required in discriminating between them is explained.

(d) Amortization. The theory of amortization and the necessary accounting procedure involved are outlined in Volume IV, Chapter IX, § 6.

Problem 50

The A B C Estate Company was formed on January 1, 1912, and the following is the trial balance as at December 31, 1913, before closing the income and expenditure accounts for the current year:

THE A B C ESTATE COMPANY

TRIAL BALANCE

December 31, 1913

		Dr.	Cr.
Capital Stock Authorized and Issued			$140,000.00
Bonds Issued: 130,000 20-year 5% Bonds, issued January 1, 1912, at a discount of 5%			120,000.00
Discount on Bonds Issued		$ 6,000.00	
Property (January 1, 1913)		250,280.50	
Capital Stock in Treasury		12,000.00	
Calls Unpaid		500.00	
Additions to Property 1913: Sinking Artesian Well		5,000.00	
A B C Estate Company: Bonds Purchased 1912 (canceled)	$6,000.00	5,850.00	
Bonds Purchased 1913	6,000.00	5,750.00	
Rents Collected			24,500.00
Fire Insurance paid for year ending June 30, 1914		300.00	
Agents' Fees and Expenses		2,850.00	
General Office Expenses		1,050.00	
Cash at Bankers and on Hand		1,389.50	
Secretary's Salary and Commission		2,380.00	
Income and Expenditure Account, 1912			14,250.00
Interest on Bonds (paid annually)		5,400.00	
		$298,750.00	$298,750.00

The rent collections include rents paid in advance—$750—and there are sundry rents outstanding not taken up on the books, amounting to $2,650, of which it is estimated $15 will not be collected.

No provision has been made in the year's accounts for depreciation of the buildings, included in the Property account, the original cost of which was $120,000. In the year 1912 the amount written off was based on an estimated life of 20 years.

Prepare balance sheet as at December 31, 1913, and income and expenditure account for the year ended that date, after making the necessary adjustments.

(Illinois C. P. A. Examination.)

Solution to Problem 50*

THE A B C ESTATE COMPANY

EXHIBIT A

BALANCE SHEET

December 31, 1913

Assets			*Liabilities*		
Capital Assets:			Capital Stock:		
Property:			Authorized	$140,000.00	
Balance at January 1, 1913 adjusted	$256,280.50		Less—Held in Treasury	12,000.00	
Add—Additions during 1913, Sinking Artesian Well	5,000.00			$128,000.00	
	$261,280.50		Less—Calls Unpaid	500.00	
Less—Reserve for Depreciation of Buildings	12,000.00	$249,280.50	Capital Stock Paid in		$127,500.00
			Funded Debt:		
			20-Year 5% Bonds Authorized	$130,000.00	
			Issued	$120,000.00	
			Less—Bonds Retired and on Hand	12,000.00	
			Bonds Outstanding and in Hands of Public		108,000.00

Current Assets:			
Rentals Due and Uncollected (less Reserve for Uncollectible Rents, $15)	$ 2,635.00		
Cash in Banks and on Hand	1,389.50	4,024.50	
Deferred Charges:			
Unexpired Insurance	$ 150.00		
Bond Discount	4,860.00	5,010.00	
		$258,315.00	

Deferred Credit:			
Rent Paid in Advance			750.00
Surplus:			
Balance at January 1, 1913		$ 14,250.00	
Deduct:			
Bond Discount applicable to 1912	$300.00		
Loss on Bonds Canceled during 1912	135.00	435.00	
Balance as adjusted		$ 13,815.00	
Add—Net Income for year ending December 31, 1913, (per Exhibit B)		8,250.00	22,065.00
			$258,315.00

*Solution by D. Himmelblau, C. P. A.

THE A B C ESTATE COMPANY

Exhibit B

STATEMENT OF INCOME AND EXPENDITURES

For the Year Ending December 31, 1913

Income:		
Rents		$26,400.00
Expenditures:		
Agents' Fees and Expenses	$2,850.00	
General Office Expenses	1,050.00	
Depreciation of Buildings	6,000.00	
Insurance Expired	150.00	
Provision for Bad Debts	15.00	
Secretary's Salary and Commission	2,380.00	
Loss on Bonds Purchased	20.00	12,465.00
Profit from Operations		$13,935.00
Deduct—Interest on Bonds		5,685.00
Net Income for year		$ 8,250.00

THE A B C ESTATE COMPANY

ADJUSTING ENTRIES

Rents Collected	$ 750.00	
Rents Paid in Advance		$ 750.00
Rent paid in advance, credited to income in error.		
Rents Uncollected	2,650.00	
Rents Collected		2,650.00
Rents due and uncollected not taken up.		
Bad Debts	15.00	
Reserve for Uncollectible Rents		15.00
Estimated loss on uncollected rents.		
Depreciation of Buildings	6,000.00	
Reserve for Depreciation of Buildings		6,000.00
5% per annum.		

Note: No information is given as a basis for providing for depreciation on the remaining property.

Property		6,000.00	
Reserve for Depreciation of Buildings			6,000.00
1912 provision credited direct to Property.			
Insurance Expired		150.00	
Fire Insurance			150.00
To charge off expired portion of premium.			
Income and Expenditures Account, 1912		300.00	
Discount on Bonds			300.00
To charge off proportion of discount applicable to the year 1912.			
Bonds Issued		6,000.00	
Surplus		135.00	
A B C Estate Company			5,850.00
Discount on Bonds			285.00
Bonds purchased 1912 canceled.			
Interest on Bonds		285.00	
Bond Discount			285.00
To charge off proportion of discount applicable to the current year:			
Original discount	$6,000.00		
Less—1912 adjustment	585.00		
Balance to be charged off during subsequent 19 periods	$5,415.00		
Bonds Purchased		270.00	
Discount on Bonds			270.00
To adjust discount on bonds purchased during 1913 (and presumably not canceled).			
Profit and Loss		20.00	
Bonds Purchased			20.00
To charge off loss sustained on purchase of six bonds at a higher price than was received therefor when issued.			

Comments on Problem 50

The object in adjusting the Property account as of January 1, 1913, was to restore it to the original cost and to carry the reserve for depreciation as a distinct account. It might be advisable to show the detailed adjustment on the balance sheet.

The uncanceled treasury bonds are carried as an asset until they are retired. In some cases it is advisable to show them as a deduction from funded debt, in order to set forth the amount of bonds in the hands of the public.

When bonds are canceled, an adjustment of the bond discount must be made. Bonds canceled are not an asset. As to bonds purchased and held in treasury, such adjustment is optional. As a general rule, it may be said that if the intention is to hold the bonds, an adjustment is proper. But if the intention is to dispose of them, the best procedure would be to carry the bonds at cost.

Unpaid calls may be shown as a current asset, if so desired.

Depreciation has been provided for by the simplest method, i.e., dividing the original cost by the estimated life. There are no residual values to be considered in this problem.

Bond discount. The difference between the nominal and effective interest should be credited periodically to Discount on Bonds account. However, the simplest method of disposing of the discount would be to divide the $6,000 by the 20-year life of the bonds, and charge each year with $300.

But the retirement of $6,000 bonds during the first year necessitates an adjustment of the Discount on Bonds account, for the reason that since the outstanding bonds have been reduced, the proportion of the discount chargeable to the subsequent periods must also be correspondingly reduced. Assume the bonds were canceled December 31, 1912. The original discount on the canceled bonds was $300, 1/20 of the total discount. But of this section of the discount, there has already been charged off in the aforementioned entry, the discount pertaining to the first fiscal period (1/20 of $300, or $15). So the adjusting entry in respect of bonds canceled would be:

Bonds Purchased	$285.00	
Discount on Bonds		$285.00
To write off discount on canceled bonds not charged off at date of cancelation.		

The effect of this entry is to raise the book value of the purchased bonds from $5,850 to $6,135. The excess of the latter figure over par represents the loss sustained by the company on the redemption of bonds at a higher price than was received when same were issued. The entry to redeem the bonds would be:

Bonds Issued	$6,000.00	
Bonds Purchased		$6,000.00
Six bonds, par value $1,000, canceled.		

and the balance of $135 in the Bonds Purchased account should be charged to Surplus as the loss occurred in 1912. The entry required is:

Surplus	$135.00	
Bonds Purchased		$135.00
Loss on bonds canceled during 1912.		

In the case of the bonds purchased in 1913, a similar adjustment must be made if the bonds are to be carried at par.

Points Illustrated in Problem 50

(a) Bond Issues. The accounting for bond issues is explained in Volume IV, Chapter X, § 8.

(b) Discount on Bonds. The true nature of discount on bonds is explained in Volume IV, Chapter X, § 10, and this problem illustrates some of the difficulties in recording the discount.

(c) Treasury Stock. The nature of treasury stock and the accounting treatment of it are explained in Volume I, Chapter XXXIII, § 9, and in Volume IV, Chapter XV. It will be noted in the solution that the par value of the treasury stock is deducted from the par value of the capital stock authorized. The facts given in the problem do not definitely show whether this capital stock in the treasury represents unissued stock or real treasury stock. It is assumed to be the latter.

(d) Subscriptions to Capital Stock. This problem illustrates the recording of subscriptions to capital stock, as explained in Volume IV, Chapter XIV, § 2.

(e) Deferred Charges and Credits. In Volume IV, Chapters II and III, the nature of deferred charges and credits and the accounting treatment required for them are explained.

(f) Depreciation Reserve. The handling of depreciation reserves and the theory underlying them are explained in Volume I, Chapter XXIX, § 4, and in Volume IV, Chapter XIII, § 2.

(g) Expenditures. Attention is invited to the use of the word "expenditure" in this problem when the word expense would be preferable. This failure to discriminate between the two words is noted in Volume I, Chapter X, § 4, and in Volume IV, Chapter IV, § 13.

Problem 51

A Corporation authorized a total issue of $500,000 of 5% bonds in denominations of $1,000 and $500, with interest payable January 1 each year, and sold the whole issue to underwriters January 1, 1918, at 90. The company issued the bonds for the underwriters at 95 and received the cash in payment February 1, 1918.

The trust deed provides that "there shall be established a fund to be called the Bond Sinking Fund, to the account of which there shall on the 31st day of December of each year be carried a sum equal to seven per cent of the total par value of the bonds issued, and that, out of the moneys so carried to the account of the said fund, the company shall pay the interest on the bonds as the same becomes due, and the balance of said moneys shall be expended each year in purchasing the bonds of the company in the open market."

In January, 1919, the company purchased $10,000 of its bonds at 97 and retired and canceled them. In January, 1920, the market price of the bonds is 98.

(a) How many bonds may be purchased from the bond sinking fund in January, 1920?

(b) Make journal entries for all the transactions from the date of the sale of the bonds to and including the purchase for the sinking fund in January, 1920.

(c) Show trial balance after posting above entries.

(*Massachusetts C. P. A. Examination.*)

Solution to Problem 51

(a)

The company purchased $11,000 of its bonds in January, 1920. At the time there was a balance in the fund of $10,800. The $11,000 bonds bought at 98 consume $10,780, leaving a balance of $20 in the fund.

(b)

January 1, 1918

Underwriters	$450,000.00	
Bond Discount	50,000.00	
Bonds Authorized		$500,000.00
Corporation authorizes an issue of $500,000 5% bonds in denominations of $500 and $1,000, interest payable January 1 of each year. Entire issue of bonds was sold to underwriters at 90.		

February 1, 1918

Cash	475,000.00	
Bonds Authorized	500,000.00	
Bonds		500,000.00
Underwriters		475,000.00
The company issued the bonds for the underwriters and received cash in payment.		
Underwriters	25,000.00	
Cash		25,000.00
Payment of underwriters' profit on issue at 95.		

December 31, 1918

Bond Sinking Fund	35,000.00	
Cash		35,000.00
The trust deed provides for the establishment of a fund into which shall be paid on December 31 of each year a sum equal to 7% of the par value of the bonds.		

January 1, 1919

Bond Interest	25,000.00	
Bond Sinking Fund		25,000.00
The trust deed provides that the company shall pay the interest on the bonds as it becomes due out of the bond sinking fund. Above entry is for the payment of interest of January 1, 1919.		

January, 1919

Bonds	10,000.00	
Bond Discount		300.00
Bond Sinking Fund		9,700.00
The company purchased $10,000 of its bonds in the open market at 97 and retired and canceled them. Interest accrued on the bonds purchased must be ignored as the exact date of purchase is not given.		

January 1, 1919

Interest on Bonds	1,000.00	
Bond Discount		1,000.00
To remove from Bond Discount the entire amount of discount applicable to the $10,000 bonds retired.		

December 31, 1919

Bond Sinking Fund	35,000.00	
Cash		35,000.00
To show the payment of the second instalment into the sinking fund.		

January 1, 1920

Bond Interest	24,500.00	
Bond Sinking Fund		24,500.00
To show payment of January, 1920, interest on bonds outstanding on that date.		

January 1, 1920

Bonds	11,000.00	
Bond Discount		220.00
Bond Sinking Fund		10,780.00
To show purchase of 11 $1,000 bonds from the bond sinking fund at 98.		

January 1, 1920

Interest on Bonds	1,100.00	
Bond Discount		1,100.00
To remove from Bond Discount the entire amount of discount applicable to the $11,000 bonds retired on above date.		

(c)

TRIAL BALANCE

January, 1920

Cash	$380,000.00	
Bond Sinking Fund	20.00	
Bond Discount Unextinguished	47,380.00	
Bond Interest	51,600.00	
Bonds		$479,000.00
	$479,000.00	$479,000.00

Comments on Problem 51

The bond discount should be amortized but no basis is given by which this may be done inasmuch as the life of the bonds is not given. From the fact that 7% of the bond issue, or $35,000, is set aside annually into the sinking fund, $25,000 of which was used the first year in paying interest, leaving $10,000 to redeem the bonds, it may possibly be presumed that the life of the bonds is 50 years, in which case $10,000 of the bond discount would be charged to Bond Interest each year. This seems like an extreme assumption, however, and is even then only approximately correct as it does not take into account the diminishing interest charge and the discount at which bonds are purchased in the open market.

Points Illustrated in Problem 51

(a) Bond Issues. The accounting required to record bond issues is outlined in Volume IV, Chapter X, § 8.

(b) Sinking Funds. The theory underlying sinking funds and the accounting necessary to record them are outlined in Volume IV, Chapter XI.

(c) Bonds in Sinking Fund. The accounting required when a company's own bonds are purchased by it and held in its sinking fund is discussed in Volume IV, Chapter XI, § 12.

(d) Bond Discount. The nature of bond discount and the accounting means for distributing it over the life of the bond issue are discussed in Volume IV, Chapter X, § 10.

(e) Underwriters' Profit. This case illustrates the profit made by underwriters to whom bonds were issued at 90 and for whom they were sold at 95.

Problem 52

If a principal of one dollar will amount to $3.3863549 in 25 years, at 5% per annum, what would be the present value of an annuity of $1,250 for 30 years at the same rate?

(Ohio C. P. A. Examination.)

Solution to Problem 52

The solution of this problem is based upon the fact that the present worth of an annuity of $1 for a given period and at a given rate is equal to the compound discount on $1 for this period and at this rate, divided by the rate of interest per period.

If $1 in 25 years at 5% per annum will amount to $3.3863549, then in 30 years, by five successive multiplications by 1.05, $1 will amount to $4.3219423. If $1 amounts to this figure, then by division, $.2313775 will amount to $1 on the same basis. From this result we obtain the fact that the compound *discount* on $1 for 30 years at 5% per annum is $.7686225. Dividing this figure by the annual rate, .05, we obtain $15.37245 as the present worth of an annuity of $1 for 30 years at 5% per annum. The present worth of a like annuity of $1,250 would be $19,215.56, which is the answer to the problem.

This solution is based upon the assumption that the annuity is payable at the *end* of each year, which is ordinarily the case, and *not* at the *beginning* of each year.

Points Illustrated in Problem 52

(a) Annuities. The only point of interest in this problem is the calculation of annuities. The principles underlying this fundamental phase of actuarial science are described in Volume IV, Chapter XI.

Problem 53

A contractor proposes to build a bridge to Belle Isle and accept the city's 4% 20-year bonds to the amount of $2,000,000 in payment. He advocates, as a means of retiring the bonds, the establishment of a toll system on foot passengers and automobiles at the respective rates of 1 and 5 cents each. Assuming the ratio of foot passengers to automobiles to be ten to one, how many of each would be necessary to pay the interest annually and create a fund which, placed at the same rate of interest, would be sufficient to retire the bonds at maturity?

Note: $1 compounded at 4% for 20 years equals $2.19112314.

(*Michigan C. P. A. Examination.*)

Solution to Problem 53

The first part of this problem is to find the annuity which will, at 4%, build up to \$2,000,000 in 20 years. The amount of an annuity equals the compound interest for the period divided by the rate per period, that is, the amount of an annuity of \$1 for 20 years at 4 % equals \$1.19112314 (i.e., \$2.19112314 — \$1) divided by .04, which equals \$29.7780785. Hence we have the proportion:

\$1 : \$29.7780785 : : X dollars : \$2,000,000

By long division X = \$67,163.57, i.e., the amount of the annual sinking fund, which at 4% will in 20 years build up to \$2,000,000.

The annual interest charge = \$80,000. Therefore, the total annual charge which is to be met from tolls on foot passengers and automobiles will be \$147,163.57 (\$80,000 + \$67,163.57).

The revenue from ten foot passengers, as per problem, would be 10 cents, and likewise the revenue from one automobile would be 5 cents. In other words, ⅔ of the annual tolls, or \$98,109.05, must come from foot passengers, and ⅓, or \$49,054.52, from automobiles.

\$98,109.05 ÷ .01 = 9,810,905, required number of foot passengers per annum.

\$49,054.52 ÷ .05 = 981,090, required number of automobiles per annum.

Points Illustrated in Problem 53

(a) Annuities. The theory of annuities and the proper method of calculating and recording them are explained in Volume IV, Chapter XI.

(b) Sinking Fund. Sinking funds and their accounting treatment are outlined in Volume IV, Chapter XI.

Problem 54

From the data given below, state clearly and explain at least three different methods of arriving at the amount to charge annually for the depreciation of any one or all of the following items:

	Value	Estimated Life	Scrap Value
Buildings	$50,000.00	50 years	$1,000.00
Machinery	20,000.00	20 "	2,000.00
Tools	5,000.00	5 "	100.00
Patterns	10,000.00	3 "	100.00

(*Wisconsin C. P. A. Examination.*)

Solution to Problem 54

1. Fixed proportion method:

Buildings,	1/50 of	$49,000	equals	$ 980	yearly
Machinery,	1/20 "	18,000	"	900	"
Tools,	1/5 "	4,900	"	980	"
Patterns,	1/3 "	9,900	"	3,300	"
				$6,160	annual charge

2. Sum of year digit method (illustrated by Tools account):

5/15	of $4,900	equals	$1,633.33	charge	first	year
4/15	" 4,900	"	1,306.67	"	second	"
3/15	" 4,900	"	980.00	"	third	"
2/15	" 4,900	"	653.33	"	fourth	"
1/15	" 4,900	"	326.67	"	fifth	"
			$4,900.00	total charge		

3. Composite life method:

Value	Life	Scrap Value	Deprecia-tion	Times Replaced	Total Ex-penditure in 50 Yrs.	Dollar Years
$50,000.00	50	$1,000.00	$49,000.00	1	$ 49,000.00	$2,450,000.00
20,000.00	20	2,000.00	18,000.00	2½	45,000.00	900,000.00
5,000.00	5	100.00	4,900.00	10	49,000.00	245,000.00
10,000.00	3	100.00	9,900.00	16⅔	165,000.00	495,000.00
$85,000.00					$308,000.00	$4,090,000.00

$$308{,}000 \div 4{,}090{,}000 \text{ equals } \frac{1}{13.28}\text{, composite life, or } 7.53\%.$$

Reserve for depreciation would therefore be 7.53% of $85,000 = $6,400.50 annual charge.

The composite life method contemplates the determination of one rate which may be applied to the total asset account and its reduction to scrap value in an average number of years.

Points Illustrated in Problem 54

(a) Depreciation. The theory of depreciation and the methods of recording it are discussed in Volume I, Chapter XXIX, and in Volume IV, Chapter XIII.

(b) Straight-Line Depreciation. This method of calculating depreciation and the arguments for and against its use are explained in Volume I, Chapter XXIX, § 7, and in Volume IV, Chapter XII, § 7.

(c) Percentage of Diminishing Value. This method which is approximated in the solution is explained in Volume I, Chapter XXIX, § 8, and in Volume IV, Chapter XII, § 8.

(d) Composite-Life Method. This method is illustrated in Volume IV, Chapter XII, § 10.

Problem 55

The Prosperous Company is organized under the laws of the State of New York to conduct a manufacturing business. The authorized capital stock is \$500,000, divided into \$250,000 common and \$250,000 preferred stock, par value of shares \$100. Five incorporators subscribe each for one share of common stock at face value. John Peters, one of the incorporators, purchases from three manufacturing companies their complete plants for \$499,500 and transfers said plants to the Prosperous Company for the remaining \$499,500 of common and preferred stock and \$100,000 of first mortgage 5% bonds out of a total issue of bonds amounting to \$150,000, leaving \$50,000 of bonds in the treasury. The incorporators then pay in cash for their respective subscriptions.

The individual assets acquired are as follows: land and buildings \$75,000; plant and machinery \$200,000; tools, equipment, and fixtures \$50,000; inventories \$100,000; accounts receivable, good \$28,000, doubtful \$5,000; cash \$12,000.

Prepare (a) opening entries for the books of the Prosperous Company, (b) initial balance sheet showing the company's financial condition.

(New York C.P.A. Examination.)

Solution to Problem 55

The Prosperous Company, a corporation incorporated under the laws of the State of New York, with an authorized capital stock of $250,000 preferred stock, and $250,000 common stock, shares being of the par value of $100 each.

Subscribers to Common Stock		$ 500.00	
Common Stock Subscriptions			$ 500.00
To record subscriptions to five shares of common stock, one share each, by the five incorporators.			
Plant, Good-will, and Sundry Assets		599,500.00	
John Peters, Vendor			599,500.00
To record purchase of certain assets, per contract of sale on file, as under:			
Preferred Stock	$250,000.00		
Common Stock	249,500.00		
Mortgage Bonds	100,000.00		
	$599,500.00		
John Peters, Vendor		599,500.00	
Preferred Stock			250,000.00
Common Stock			249,500.00
First Mortgage 5% Bonds			100,000.00
To record full payment for assets acquired from John Peters.			
Cash		500.00	
Subscribers to Common Stock			500.00
To record payment of subscriptions.			
Common Stock Subscriptions		500.00	
Common Stock			500.00

Land and Buildings	75,000.00	
Plant and Machinery	200,000.00	
Tools, Equipment, and Fixtures	50,000.00	
Inventories	100,000.00	
Accounts Receivable	33,000.00	
Cash	12,000.00	
Good-Will	134,500.00	
Reserve for Bad and Doubtful Accounts		5,000.00
Plant, Good-Will and Sundry Assets		599,500.00

To place upon the records the various assets acquired in accordance with decisions of the directors. A reserve is set up to provide for possible loss on doubtful accounts receivable.

THE PROSPEROUS COMPANY

BALANCE SHEET

As at ....

Assets

Cash		$ 12,500.00
Accounts Receivable	$33,000.00	
Less—Reserve	5,000.00	28,000.00
Inventories		100,000.00
Land and Buildings		75,000.00
Plant and Machinery		200,000.00
Tools, Equipment, and Fixtures		50,000.00
Good-Will		134,500.00
		$600,000.00

Liabilities

First Mortgage 5% Bonds ($150,000 authorized)		$100,000.00
Capital Stock (authorized and outstanding):		
Preferred	$250,000.00	
Common	250,000.00	500,000.00
		$600,000.00

Points Illustrated in Problem 55

(a) Corporation Opening Entries. In Volume I, Chapter XXXIII, § 6, and in Volume IV, Chapter XIV, the entries usually required to open the books of a corporation are explained.

(b) Subscriptions to Capital Stock. The recording of subscriptions to capital stock is described in Volume IV, Chapter XIV, § 2.

(c) Plant and Sundry Assets Account. The use of this account is described in Volume I, Chapter XXXIII, § 8.

(d) Capital Stock Accounts. This problem illustrates the use of a separate account for each kind of capital stock issued. This is in accordance with the principles outlined in Volume I, Chapter XXXIII, § 5, and in Volume IV, Chapter XIV, § 5.

(e) Reserve for Bad Debts. The practical method of determining the amount to be set aside as a reserve for bad debts is disclosed in Volume I, Chapter XXIX, § 11, and in Volume IV, Chapter XVI, § 2.

Problem 56

A corporation is organized with a capital stock of $100,000, par value of shares $100, to acquire a business formerly conducted by A. The business shows sundry assets $150,000, and sundry liabilities $80,000. One share of stock each is sold at par to X, Y, and Z, who afterward become directors of the new corporation. The remaining stock is issued to A, who immediately donates $10,000 of stock to the treasury to procure additional capital. Two months later $5,000 of the donated stock is sold at 48, and six months later the remainder is sold at 62.

Set up journal entries necessary to record the above transactions.

Solution to Problem 56

Cash	$ 300.0	
Capital Stock		$ 300.00
To record the sale for cash of a share of stock each to X, Y, and Z.		
Sundry Assets	150,000.00	
A, Vendor		150,000.00
To record the assets acquired from A.		
A, Vendor	80,000.00	
Sundry Liabilities		80,000.00
To record the liabilities assumed.		
A, Vendor	70,000.00	
Good-Will	29,700.00	
Capital Stock		99,700.00
To show the issue to A of the entire capital stock of the company with the exception of the three shares sold for cash. As the amount of stock issued to A is $29,700 in excess of the net worth of the property acquired from him, the excess represents the valuation expressed in stock which was placed upon the good-will of the business acquired from him.		
Treasury Stock	10,000.00	
Treasury Stock Donated		10,000.00
To record the donation of 100 shares of stock to the corporation by A; to be sold to procure additional capital.		
Cash	2,400.00	
Treasury Stock		2,400.00
To record the sale of 50 shares of treasury stock at 48.		
Cash	2,600.00	
Treasury Stock		2,600.00
To record the sale of the remaining 50 shares of treasury stock at 52.		

Treasury Stock Donated	5,000.00	
Treasury Stock		5,000.00
To close the Treasury Stock account.		
Treasury Stock Donated	5,000.00	
Surplus		5,000.00
To record the surplus secured through the donation of treasury stock.		

Points Illustrated in Problem 56

(a) Treasury Stock. The nature of treasury stock and the purpose for which it is used are described in Volume I, Chapter XXXIII, § 9, and further elaborated in Volume IV, Chapter XV, § 3.

(b) Surplus. When the donated treasury stock is sold, a clear increase in surplus results. Some accountants prefer to show surplus from this source in a special account earmarked by some title which will indicate its nature. There seems to be no reason for this because such surplus is available for distribution as dividends. If the corporation as a matter of financial policy decides not to distribute it, then a reserve should be created, but the original credit should be made in the general Surplus account. (See Volume I, Chapter XXXIII, § 9, and Volume IV, Chapter XV.)

(c) Treasury Stock Donated. The purpose of this account is to guard against the anticipation of a surplus increase before the treasury stock has been disposed of. There can be no increase in surplus unless the donated stock is sold for more than the consideration, if any, that was paid for it. If the treasury stock was acquired through outright donation, then any amount received for it would constitute an increase in surplus. This increase, however, should not be recorded until the disposition has been made. (See Volume I, Chapter XXXIII, § 9, and Volume IV, Chapter XV, § 4.)

Problem 57

A corporation organized under the laws of the State of New York has an authorized capital stock of $200,000, consisting of 1,000 shares common and 1,000 shares preferred stock, par value $100 each. Patents were acquired of a patentee for $50,000 common and $50,000 preferred stock. The patentee donated one-half of each issue of his stock to the company for its use in securing working capital.

Show the journal entries necessary to record the above transactions, and submit balance sheet prepared from these entries.

Solution to Problem 57

Unissued Preferred Stock	$100,000.00	
Unissued Common stock	100,000.00	
Capital Stock Preferred Authorized		$100,000.00
Capital Stock Common Authorized		100,000.00
To bring onto the books as a matter of record the full authorized issue of both common and preferred stock.		
Patents	100,000.00	
Unissued Preferred Stock		50,000.00
Unissued Common Stock		50,000.00
Patents are acquired of the patentee, preferred stock to the amount of $50,000 and common stock of the same amount being issued in payment thereof.		
Treasury Stock, Preferred	25,000.00	
Treasury Stock, Common	25,000.00	
Surplus from Treasury Stock		50,000.00
The patentee donated one-half of each issue of his stock to the company for its use in securing working capital.		

BALANCE SHEET

As at............

Assets

Patents		$100,000.00

Liabilities and Capital

Capital Stock Preferred Authorized	$100,000.00	
Less—Unissued	50,000.00	
Issued	$ 50,000.00	
Less—Held in Treasury	25,000.00	
Outstanding		$ 25,000.00
Capital Stock Common Authorized	$100,000.00	
Less—Unissued	50,000.00	
Issued	$ 50,000.00	
Less—Held in Treasury	25,000.00	
Outstanding		25,000.00
Surplus from Treasury Stock Donated		50,000.00
		$100,000.00

Points Illustrated in Problem 57

(a) Treasury Stock. For a discussion of the nature and uses of treasury stock, see Volume I, Chapter XXXIII, § 9, and Volume IV, Chapter XV.

(b) Surplus from Treasury Stock. This account is used in order to guard against showing a surplus before the treasury stock has been disposed of. Attention is invited to the comments under "Treasury Stock Donated" in the comments on Problem 56. (See also Volume I, Chapter XXXIII, § 9, and Volume IV, Chapter XV, § 4.)

(c) Reduction of Cost of Patent. It has been suggested that the final surplus secured from the disposition of donated treasury stock might be deducted from the cost of the asset acquired at the time the stock was originally issued. The argument in favor of this is that, if the vendor from whom the asset was acquired was willing to donate to the corporation a portion of the capital stock that was paid him in consideration for the asset, it must follow that the asset was not worth the par value of the stock issued for it. This view, however, would contravene the corporation laws which require that stock cannot be issued for consideration worth less than its par. For a discussion of this phase of corporation law, see Volume IV, Chapter XV, § 1.

(d) Treasury Stock on Balance Sheet. In the balance sheet in this case the treasury stock was deducted from the total stock issued. This is in accordance with the procedure suggested in Volume IV, Chapter XV, § 8.

(e) Authorized Capital Stock. An account is opened in this solution for the authorized capital stock. The way in which such an account is operated and an argument in favor of its adoption will be found in Volume IV, Chapter XIV, § 2.

Problem 58

A company packs a coupon in each box of goods sold. The company agrees to redeem 100 coupons with premiums costing $1 apiece. 25% of the coupons are never presented for redemption.

Prepare sample journal entries for the bookkeepers to follow which will give the last of each month the expense for the month for coupons given out, the amount of premiums on hand, and the gross and net liability for outstanding coupons, and state briefly how these entries will produce the result wanted.

(*Massachusetts C. P. A. Examination.*)

Solution to Problem 58*

JOURNAL ENTRIES

Coupon Advertising (at 75 cents per 100)	$.......	
Estimated Lapses (at 25 cents per 100)	....	
Unredeemed Coupons (at $1 per 100)		$.......
Coupons contained in ...... hundred boxes sold during month.		
Premiums	....	
Accounts Payable (or Cash)		....
Premiums purchased during the month (at $1 each).		
Unredeemed Coupons	....	
Premiums		....
Premiums exchanged for coupons redeemed during month (at $1 per 100).		

Comments on Problem 58

"Coupon Advertising" covers the expense for the month.

Balance of "Premiums" is value of premiums on hand.

Balance of "Unredeemed Coupons" is gross liability.

Balance of "Unredeemed Coupons" less balance of "Estimated Lapses" is net liability on account of outstanding coupons.

Note that the fact that the premiums given in exchange for 100 coupons cost $1 apiece is essential. For instance, in case they cost 90 cents apiece, the expense for the month would be 75 cents per 100 boxes *sold* during the month less 10 cents per 100 coupons *redeemed* during the month.

*Solution by Hazen P. Philbrick, C. P. A.

Points Illustrated in Problem 58

(a) Contingent Liabilities. The only point in this problem of especial interest is the recording of contingent liabilities. The necessity for this procedure is indicated in the discussion in Volume IV, Chapter III, § 1, and in Chapter XVIII, § 5.

Problem 59

An accountant is engaged by a certain concern to draw up financial statements and to close the books as of December 31, 1920. He finds that no provision for accrued or prepaid items was made when the books were closed December 31, 1919, and he also locates certain errors as indicated in the following:

Goods received prior to December 31, 1919, and included in the merchandise inventory taken as of that date but not entered on the books until January, 1920, $8,000.

Error in taking inventory December, 31, 1919, $1,500 too little.

Depreciation on real estate—estimated—for 1919, $6,500; for 1920, $7,000.

Make the necessary adjusting entries.

Accrued Wages and Salaries:	
December 31, 1919	$1,640.00
December 31, 1920	2,000.00
Insurance Paid in Advance:	
December 31, 1919	360.00
December 31, 1920	180.00
Accrued Interest on Mortgage:	
December 31, 1919	1,200.00
December 31, 1920	1,200.00

Solution to Problem 59

December 31, 1920

Surplus	$1,640.00	
Wages and Salaries		$1,640.00
The above entry is to debit Surplus account with wages paid in 1920 but representing expenses of the preceding year.		
Wages and Salaries	2,000.00	
Wages and Salaries Accrued		2,000.00
To set up accrued wages and salaries as at this date.		
Insurance	360.00	
Surplus		360.00
To credit Surplus account with insurance unexpired as at December 31, 1919, but incorrectly considered as an expense of 1919.		
Insurance Paid in Advance	180.00	
Insurance		180.00
To set up as an asset the insurance unexpired as at this date.		
Surplus	1,200.00	
Interest on Mortgage		1,200.00
To debit Surplus account with interest on mortgage paid in 1920, but representing an expense of the preceding year.		
Interest on Mortgage	1,200.00	
Interest on Mortgage Accrued		1,200.00
To set up as a liability such interest as has accrued on mortgage.		
Surplus	8,000.00	
Merchandise Inventory		8,000.00
To credit Inventory account with goods received in 1919, but which were not recorded as purchases, and hence should not have entered into the profit computation for 1919. Surplus account should show a consequent reduction, and is therefore debited.		

Merchandise Inventory	1,500.00	
Surplus		1,500.00
To adjust the Inventory account as at the beginning of this year, it having been figured at too small an amount by $1,500. A consequent increase in profits for 1919 results, hence Surplus account is credited.		
Surplus	6,500.00	
Reserve for Depreciation on Real Estate		6,500.00
Estimated depreciation on real estate was not computed in 1919. The above entry reduces the Surplus account on the basis of the depreciation that should have been considered as an expense of 1919.		
Depreciation on Real Estate	7,000.00	
Reserve for Depreciation on Real Estate		7,000.00
To record the estimated depreciation on real estate for the current year, the amount being added to the reserve account.		

Points Illustrated in Problem 59

(a) Adjustment of Surplus. The various surplus adjustments in this problem are made in accordance with principles outlined in Volume IV, Chapter VII, § 4.

(b) Accrued Liabilities. As explained in Volume IV, Chapter III, § 1, liabilities accrued but not yet due should be recorded on the books in order that the financial position of the business may be exactly stated.

(c) Prepaid Expenses. The recording of prepaid expenses is in accordance with principles outlined in Volume IV, Chapter II.

(d) Depreciation on Real Estate. In view of the fact that land does not depreciate, as explained in Volume IV, Chapter XVII, § 4, the fact that in this case depreciation is taken on real estate would indicate that the real estate account covered buildings as well as land. This is not in accordance with the best accounting practice.

(e) Merchandise Invoices. Care must be exercised to enter on the books all invoices for merchandise received and taken into stock.

Problem 60

A is the proprietor of a business. His books were closed as of December 31, 1919, at which time his capital account showed a credit balance of $18,000. He offers to sell B a one-third interest in the business for $10,000, which offer is accepted by B. Prepare balance sheet of A and B.

Solution to Problem 60

The sale of a one-third interest in the business for $10,000 is equivalent to a valuation of $30,000 upon the business as a whole. As A's capital account shows a net worth according to the books of only $18,000, the excess is a measure of the good-will which is brought onto the books by an entry debiting Good-Will and crediting A with $12,000. An entry would then be made debiting A with $10,000 and crediting B with $10,000, which would result in the following balance sheet:

BALANCE SHEET OF A & B

Sundry Net Assets	$18,000.00	A, Capital	$20,000.00
Good-Will	12,000.00	B, Capital	10,000.00
	$30,000.00		$30,000.00

A different treatment of the case by which good-will is ignored would be to make an entry debiting A with

$6,000 and crediting B with $6,000, giving the following balance sheet:

BALANCE SHEET OF A & B

Sundry Net Assets	$18,000.00	A, Capital	$12,000.00
		B, Capital	6,000.00
	$18,000.00		$18,000.00

By either method, the relation existing between the interests of A and B in the business is 2 : 1, which accords with the partnership agreement.

Comments on Problem 60

It is apparent in this problem that there has merely been a sale by A of a share in his business, resulting in a division of his interest, the assets remaining the same.

In the above problem, if the agreement had been that B was to *invest* $10,000, thus acquiring a one-third interest in the business, the treatment of the case would be as follows:

Cash	$10,000.00	
B		$10,000.00
To bring on the books the cash invested by B.		

An investment of $10,000 by which a one-third interest is acquired means again a valuation of $30,000 on the business as a whole. Therefore, good-will of $2,000 would be brought on the books and credited to A, giving the following balance sheet:

BALANCE SHEET OF A & B

Sundry Assets	$18,000.00	A, Capital	$20,000.00
Cash	10,000.00	B, Capital	10,000.00
Good-Will	2,000.00		
	$30,000.00		$30,000.00

Or again, ignoring good-will, after bringing on the cash invested by B, thus raising the assets to $28,000, an adjusting entry would be made debiting B and crediting A with $666.67, thereby establishing a ratio of 2 : 1 between the capital accounts of the two partners.

If in this case, the agreement was that the investment of $10,000 entitled B to one-third of the *profits* instead of a one-third *interest* in the business, the only entry necessary would be an entry bringing on the cash and crediting it to B's capital account.

The capital accounts would then show the contribution of each partner and consequently their present interests in the assets, which need have no relation to the basis on which profits are shared.

Points Illustrated in Problem 60

(a) Good-Will. The nature of good-will and the circumstances under which it may properly be set up on the books are discussed in Volume IV, Chapter XIX, §§ 2 and 7.

(b) Capital Accounts. This problem illustrates the function of the capital account for a partner. (Refer to Volume I, Chapter XXXI, § 2.)

(c) Admission of Partner. For the bookkeeping procedure required upon the admission of a partner, see Volume I, Chapter XXXI, § 3.

(d) Profit and Loss Distribution. As explained in Volume I, Chapter XXXI, § 6, partners may agree upon any basis for the distribution of profits or losses. In that chapter there are suggested several methods which are in common use.

Problem 61

A firm is composed of X and Y whose capital accounts show $10,000 and $14,000 respectively, profits being shared equally. Show entries for the admission of Z as a partner under each of the following conditions:

(a) Z offers to buy a one-third interest in the business from X and Y for $15,000.

(b) Z offers to contribute such a sum as will give him a one-third interest in the partnership.

In each case, the interests of the three partners are to be adjusted in such a way as to make that of all three partners equal.

Solution to Problem 61

(a) If Z is willing to pay $15,000 for a one-third interest in the business, he estimates the business as a whole to be worth $45,000. As the present net assets amount to $24,000, good-will would be brought on the books for an amount equal to the excess of $45,000 over $24,000, by the following entry:

Good-Will	$21,000.00	
X		$10,500.00
Y		10,500.00

The good-will would be divided between X and Y in the proportion in which they share profits.

This would be followed by an entry:

X	$5,500.00	
Y	9,500.00	
Z		$15,000.00

If good-will is not taken into account, the following entry will show the admission of Z:

X	$2,000.00	
Y	6,000.00	
Z		$8,000.00

(b) If Z is to contribute such a sum as will give him a one-third interest in the business, the present capital of $24,000 would represent the other two-thirds; on this basis, the total capital would be $36,000, making Z's contribution $12,000.

Points Illustrated in Problem 61

(a) Good-Will. For a discussion of good-will and all the necessary accounting treatment of it, see Volume IV, Chapter XIX.

(b) Admission of Partner. The bookkeeping necessary when a new partner is admitted to a firm is explained in Volume I, Chapter XXXI, § 3.

Problem 62

A and B carried on business in partnership and divided profits and losses in proportion to their capital, three-fifths and two-fifths respectively. On January 1, 1920, A's capital was $52,500, and B's $35,000, as shown by a balance sheet of that date. They agreed to admit C as a partner from the same date on the following terms:

1. Assets and liabilities and capital to be taken as shown in the balance sheet.
2. $12,500 to be added to the assets for good-will.
3. The amount of good-will to be added to A's and B's capital in the proportion in which they divide profits.
4. C to pay to the partnership such a sum as will give him a one-fifth share in the business.

(a) State what amount of capital C has to bring in.

(b) Set out the capital accounts of each partner in the new partnership.

(c) State in what proportions the profits will be divided in the future—A and B, as between themselves, sharing in the same proportions as before.

Solution to Problem 62

Assets (originally)	$ 87,500.00
Add—Good-Will	12,500.00
Total Assets prior to entrance of C	$100,000.00

The problem states specifically that what C pays will be "to the partnership," not to the individuals. Therefore, C is to pay such a sum as will increase the assets to a figure that will give him $^1/_5$ of the total.

Thus, \$100,000 must represent $^4/_5$ of the assets of A, B, and C.

$\therefore$ \$100,000 $\div$ .80 = \$125,000, the new assets

\$125,000 − \$100,000 = \$25,000 the amount C must bring in.

$$\text{Assets, \$125,000}\begin{cases}\text{A, \$60,000}\\ \text{B, \ \ 40,000}\\ \text{C, \ \ 25,000}\end{cases}$$

A, Capital

	Jan. 1, 1920. Balance..	\$52,500.00
	$^3/_5$ Good-Will	7,500.00
		\$60,000.00

B, Capital

	Jan. 1, 1920. Balance..	\$35,000.00
	$^2/_5$ Good-Will	5,000.00
		\$40,000.00

C, Capital

	Cash	\$25,000.00

Distribution of profit:

A — 48%
B — 32%
C — 20%

As C is to receive $1/5$ of the profits, he gets 20%.

A and B are to split the remaining 80%, $^3/_5$ to A and $^2/_5$ to B, as previously.

$$80\% \times {}^3/_5 = 48\% \text{ to A}$$
$$80\% \times {}^2/_5 = 32\% \text{ to B}$$

Points Illustrated in Problem 62

(a) Good-Will. See Volume IV, Chapter XIX, §§ 2–7, for a discussion of the nature of good-will and the accounting procedures in connection therewith.
(b) Profit and Loss Distribution. In Volume I, Chapter XXXI, § 7, the most common methods by which profits and losses are distributed are outlined.
(c) Admission of Partner. The bookkeeping required upon the admission of a partner to the firm is explained in Volume I, Chapter XXXI, § 3.

Problem 63

C, D, and E are partners with equal capital and share equally in the profits. After trading for three years E wishes to retire and D elects to remain and purchase the share of the former. The partnership agreement provides that the retiring partner shall receive a share of the good-will, the value of the latter to be equal to two-thirds of the average of the profits of the last three years preceding his retirement.

The following are the figures and we are requested to prepare a balance sheet and a profit and loss account as of June 30, 1916, and an account showing the amount due to E from the remaining partners:

Capital Account, C	$ 8,000.00
" " D	8,000.00
" " E	8,000.00
Plant and Equipment	14,840.00
Trade-Marks	4,500.00
Inventory, June 30, 1916	7,600.00
" July 1, 1915	4,800.00
Accounts Receivable	19,400.00
Merchandise Creditors	13,402.00

Sales	55,188.00
Purchases	27,804.00
Wages and Salaries	4,600.00
General Expenses	1,560.00
Partners' Drawing Accounts:	
C, debit balance	5,500.00
D, " "	5,500.00
E, " "	5,500.00
Cash in Bank and on Hand	3,974.00

The following adjustments are to be made for the year closed: 10 % depreciation on the plant and equipment; 15 % on the trade-marks; 10 % reserve for bad and doubtful debts.

There is on the books a special reserve account to cover depreciation of the stock on hand which is of a very perishable nature. The reserve amounts to $5,388, and must be equitably dealt with in the dissolution of the partnership.

The previous two years' profits were $17,816 and $22,020, respectively.

(Minnesota C. P. A. Examination.)

Solution to Problem 63

C, D, AND E PARTNERSHIP

ADJUSTING ENTRIES

June 30, 1916

Depreciation on Plant and Equipment	$1,484.00	
Reserve for Depreciation on Plant Equipment		$1,484.00
To establish a reserve for an estimated depreciation of 10% on plant and equipment.		
Depreciation of Trade-Marks	675.00	
Reserve for Depreciation of Trade-Marks		675.00
To establish a reserve for an estimated depreciation of 15% on book value of trade-marks.		

Anticipated Loss on Doubtful Accounts	1,940.00	
Reserve for Doubtful Accounts		1,940.00
To set up a reserve estimated at 16% of the open accounts receivable on the books in anticipation of loss through worthless debts.		

C, D, AND E PARTNERSHIP

PROFIT AND LOSS STATEMENT

For the Year Ended June 30, 1916

Net Sales			$55,188.00
Deduct—Cost of Sales:			
Inventory, July 1, 1915	$ 4,800.00		
Add—Net Purchases	27,804.00	$32,604.00	
Less—Inventory, June 30, 1916		7,600.00	25,004.00
Gross Profit on Sales			$30,184.00
Deduct—Expenses:			
Wages and Salaries		$ 4,600.00	
General Expenses		1,560.00	
Depreciation on Plant and Equipment		1,484.00	
Depreciation on Trade-Mark		675.00	
Anticipated Loss on Doubtful Accounts		1,940.00	10,259.00
Net Profit			$19,925.00
Distribution of Profits:			
C—1/3		$ 6,641.67	
D—1/3		6,641.67	
E—1/3		6,641.66	$19,925.00

C, D, AND E PARTNERSHIP

BALANCE SHEET

June 30, 1916

Assets

Plant and Equipment	$14,840.00	
Less—Reserve for Depreciation	1,484.00	$13,356.00

Trade-Marks	$ 4,500.00		
Less—Reserve for Depreciation	675.00	3,825.00	
Cash		3,974.00	
Accounts Receivable	$19,400.00		
Less—Reserve for Loss on Doubtful Accounts	1,940.00	17,460.00	
Inventory	$ 7,600.00		
Less—Reserve for Depreciation	5,388.00	2,212.00	
Total Assets			$40,827.00

Liabilities

Accounts Payable			$13,402.00
Capital:			
C—Investment	$ 8,000.00		
Less—Drawings	5,500.00		
	$ 2,500.00		
Plus Profit for period	6,641.67	$ 9,141.67	
D—Investment	$ 8,000.00		
Less—Drawings	5,500.00		
	$ 2,500.00		
Plus Profit for period	6,641.67	9,141.67	
E—Investment	$ 8,000.00		
Less—Drawings	5,500.00		
	$ 2,500.00		
Plus Profit for period	6,641.66	9,141.66	27,425.00
Total Liabilities and Capital			$40,827.00

The determination and distribution of good-will are as follows:

Profits for three years ended June 30, 1916, equals $17,816 + $22,020 + $19,925, or $59,761.

The average profits per year equals one-third of $59,761, or $19,920.33.

The good-will equals two-thirds of the average profits, or $13,280.22.

This good-will is distributed equally among the three partners, each receiving a net credit of $4,426.74.

Statement showing amount due E:

Balance of Capital Account, per Balance Sheet	$ 9,141.67
Add—Share of Good-Will	4,426.74
Amount Due	$13,568.41

Points Illustrated in Problem 63

(a) Good-Will. The nature of good-will and the circumstances under which it may properly be recorded upon books of account are discussed in Volume IV, Chapter XIX, §§ 2–7.

(b) Dissolution of Firm. The bookkeeping necessary upon the dissolution of the partnership is described in Volume I, Chapter XXXII, § 5.

Problem 64

The stock and plant of the Rockview Manufacturing Company were badly damaged by fire on June 30, 1920. An appraisal of the loss made as a basis for settlement with the insurance companies showed that machinery which cost $5,000 was destroyed, against which a reserve for depreciation had been built up of $1,000; that the building was damaged to the extent of $10,000; that raw material was destroyed which cost $14,000; that finished goods were also destroyed which cost $20,000 to manufacture.

Make the necessary entries to establish the loss on the books, and to show a cash settlement with the insurance companies for $35,000.

Solution to Problem 64

June 30, 1920

Fire Loss	$ 4,000.00	
Reserve for Depreciation of Machinery	1,000.00	
Machinery		$ 5,000.00
(Explanation.)		
Fire Loss	44,000.00	
Buildings		10,000.00
Finished Goods		20,000.00
Raw Materials		14,000.00
(Explanation.)		
Cash	35,000.00	
Fire Loss		35,000.00
(Explanation.)		
Surplus	13,000.00	
Fire Loss		13,000.00
To record fire loss not compensated for by insurance.		

Points Illustrated in Problem 64

(a) Fire Loss. The method of keeping a Fire Loss account and some of the points to be observed in the practical use of it are suggested in Volume IV, Chapter XX, § 8.

(b) Surplus Adjustment. Attention is invited to the fact that the balance of the Fire Loss account is debited to Surplus. This procedure was adopted because the loss was an unusual transaction and should not affect the current Profit and Loss account. (For other examples of surplus adjustments, see Volume IV, Chapter VII, § 4.)

Problem 65

The G. W. Brown Company suffered a fire on May 25, 1920, resulting in the loss of its building, furniture, and equipment, costing $207.90, and of the greater portion of its stock. The damaged stock was sold for $1,500. A cash settlement was made with the insurance companies for $8,000: $3,000 on stock and $5,000 on building.

You are called in to prepare the financial statements and you find that the bookkeeper had been keeping a Merchandise account; an analysis of the account showed the following summarized charges and credits:

Merchandise Debits

Inventory, January 1, 1920	$ 3,372.55
Purchases	14,152.39
Freight and Cartage In	377.32

Merchandise Credits

Sales—Regular	$10,059.46
Sales of Damaged Stock	1,500.00
Insurance Settlement	3,000.00
Cost of Goods Shipped to Commission Merchants	2,745.50

The cost of goods damaged and destroyed by fire had been estimated at $8,920.38.

The Real Estate account showed a debit of $12,125, representing original cost, and a credit of $5,000 representing the insurance settlement. The building lot is appraised at $6,000.

Make all entries necessary to adjust matters, including the separation of the single Merchandise account into separate accounts; prepare a statement showing details of the loss, a statement showing gross profit on sales to time of fire, and entries to close all accounts given.

Solution to Problem 65

The following entry is made to close out the old Merchandise account and to open instead thereof accounts showing the various trading activities as well as the conditions arising from the fire.

Inventory, January 1, 1920	$ 3,372.55	
Purchases	14,152.39	
Freight and Cartage In	377.32	
Sales		$10,059.46
Fire Loss		1,500.00
Fire Loss		3,000.00
Purchases		2,745.50
Merchandise		597.30
Fire Loss	8,920.38	
Purchases		8,920.38
To remove from the Purchases account the cost of goods destroyed by fire.		

THE G. W. BROWN COMPANY

STATEMENT SHOWING FIRE LOSS

May 25, 1920

Merchandise:			
Cost of Goods Destroyed and Damaged			$8,920.38
Less—Returns:			
Sale of Damaged Goods		$ 1,500.00	
Insurance Settlement		3,000.00	4,500.00
Loss on Merchandise			$4,420.38
Real Estate:			
Cost		$12,125.00	
Less:			
Insurance	$5,000.00		
Value of Land	6,000.00	11,000.00	
Loss on Building			1,125.00
Furniture and Fixtures:			
Total Loss			207.90
Net Fire Loss			$5,753.28

THE G. W. BROWN COMPANY

TRADING STATEMENT

January 1, 1920, to May 25, 1920

Sales				$10,059.46
Cost of Sales:				
Inventory, January 1			$3,372.55	
Purchases—Gross	$14,152.39			
Freight and Cartage	377.32	$14,529.71		
Less:				
Cost of Goods Destroyed	$ 8,920.38			
Cost of Consigned Goods	2,745.50	11,665.88	2,863.83	6,236.38
Gross Profit on Sales				$ 3,823.08

ENTRIES TO CLOSE THE TRADING AND FIRE LOSS ACCOUNTS

Sales	$10,059.46	
Trading		$10,059.46
To close the sales for the period into Trading.		
Trading	3,372.55	
Inventory		3,372.55
To close the inventory as of January 1 into Trading.		
Trading	377.32	
Freight and Cartage		377.32
To close freight and cartage into Trading.		
Trading	2,863.83	
Purchases		2,863.83
To close the net cost of goods sold during the period into Trading.		
Trading	3,823.08	
Profit and Loss		3,823.08
To close the gross profit on sales into the Profit and Loss account.		

Fire Loss	1,332.90	
Real Estate		1,125.00
Furniture and Fixtures		207.90
To close the loss on real estate and furniture and fixtures into the Fire Loss account.		
Surplus	5,753.28	
Fire Loss		5,753.28
To close the net fire loss into Surplus.		

Points Illustrated in Problem 65

(a) Fire Loss. See Volume IV, Chapter XX, § 8, for a general description of the bookkeeping necessary to record fire losses.

(b) Merchandise Account. In Volume I, Chapter VIII, § 3, the Merchandise account which formerly was in common use is described. The inconvenience of such an account and the necessity for analyzing it can be noted in this problem.

(c) Consignments. When goods are shipped on consignment, no sale has taken place and accordingly the credit should not be to a Sales account but may properly be to the Purchases or Inventory account as shown in this problem. The reason for this is that profit must not be anticipated and the credit for the sale must be deferred. (See Volume IV, Chapter III.)

(d) Freight Inward. For a discussion of the adding of freight inward to the cost of purchases, see Volume I, Chapter IX, § 8.

Problem 66

On October 31, 1913, a fire occurred at the plant of a furniture manufacturing company which destroyed part of the equipment, a large portion of the stock, and one of the accounts receivable ledgers. A claim under the company's policies of insurance of $250,000 was filed, which was ultimately settled by the adjusters on December 1, 1913, for $200,000 which was paid in cash, the company to retain all salvage. The following is a summary of the book value of the assets destroyed or lost:

Equipment	$ 75,000.00
Merchandise	100,000.00
Accounts Receivable	80,000.00
	$255,000.00

At December 31, 1913, when closing the books for the fiscal year, it was estimated that the salvage and book debts would realize $90,000, as follows:

Equipment	$ 15,000.00
Merchandise	25,000.00
Book Debts	50,000.00

(a) Draw up a fire loss adjustment account and show the profit or loss resulting from the conflagration, stating how you would treat it in the annual accounts at December 31, 1913. State also what steps you would take to verify the salvage values placed on the various items for the purposes of the balance sheet at that date.

(b) During the year succeeding that of the fire, i.e., in 1914, it turned out that the estimated salvage value of the stock had been excessive and that only $20,000 was realized thereon, while the book debts proved to have been undervalued and actually produced $70,000. How would you deal with these differences in the 1914 accounts?

(Illinois C. P. A. Examination.)

Solution to Problem 66*

FURNITURE MANUFACTURING COMPANY

Fire Loss Adjustment Account

Book Value of Assets Destroyed:			Cash Settlement with Company..		$200,000.00
Equipment.......	$ 75,000.00		Estimated Value of Salvage:		
Merchandise......	100,000.00		Equipment........	$15,000.00	
Accounts Receivable...........	80,000.00	$255,000.00	Merchandise.......	25,000.00	
			Book Debts.......	50,000.00	90,000.00
Excess of Estimated Realization over Book Value—carried to Reserve for Realization of Salvage.......................		35,000.00			
		$290,000.00			$290,000.00
Deficiency on Realization of Merchandise....................		$ 5,000.00	Reserve for Realization of Salvage		$ 35,000.00
To Surplus....................		50,000.00	Excess on Realization of Book Debts......................		20,000.00
		$ 55,000.00			$ 55,000.00

(a) As auditor it would be necessary to inquire into the basis for valuing the salvage. Equipment should be valued at its cost less the estimated depreciation incurred through the fire. Merchandise should be valued at its cost, purchase, or market price, whichever is the lowest, less the estimated reduction on its cost value due to fire damage. It is decidedly wrong to value it at its realizable value when sold in the ordinary course of trade, as this is taking credit for the profit on the goods before they are sold and depriving the subsequent periods of the profit on these goods when sold. Accounts receivable can be valued at their realizable value, which, if an adequate reserve for loss on bad debts has been provided, will be their book value. When some of the records cannot be read with certainty,

* Solution by D. Himmelblau, C. P. A.

allowance must be made for the estimated loss on those records that are obscure.

(b) Where the Fire Loss Adjustment account results in a credit balance, it is advisable to carry such balance to a reserve account until the salvage has been realized upon. This is especially necessary when the salvage is large in amount and uncertain in value. When the salvage has been realized upon, the balance of this reserve account can be carried to Surplus if the board of directors so decides.

Points Illustrated in Problem 66

(a) Fire Loss. The most practicable way of recording the facts involved in fire losses is discussed in Volume IV, Chapter XX, § 8.

(b) Surplus. The balance of the Fire Loss account is closed into Surplus because of the unusual nature of the transactions involved. For other adjustments of surplus of a similar nature, see Volume IV, Chapter VII, § 4.

(c) Unrealized Profit. As suggested in the solution of this problem, when any doubt exists as to the ultimate collection and realization of asset values, the credit for such values should be deferred until the realization actually occurs. Accordingly, in this problem the balance of the Fire Loss Adjustment account was carried as a reserve until the salvage had been realized upon. This method of deferring credits is explained in Volume IV, Chapters III and VIII.

Problem 67

Corporation C is organized in New York with an authorized capital stock of $500,000, divided equally between preferred and common, the shares being of the par value of $100 each. Sufficient shares of common stock are subscribed and paid in cash to effect the incorporation, and a contract is entered into for the taking over of the business of Corporation A and of Corporation B, the balance sheets of which, at the time of the transfer, displayed financial condition as follows:

CORPORATION A

Assets		*Liabilities*	
Plant and Machinery .	$ 35,000.00	Common Stock	$ 50,000.00
Raw Material	6,500.00	Preferred Stock	42,500.00
Work in Process	9,200.00	Preferred Stock Scrip .	7,500.00
Finished Product	16,700.00	Surplus	5,400.00
Accounts Receivable ..	33,500.00	Accounts Payable	14,200.00
Bills Receivable	14,500.00		
Deferred Charges	1,200.00		
Cash	3,000.00		
	$119,600.00		$119,600.00

CORPORATION B

Assets		*Liabilities*	
Plant and Machinery .	$ 51,000.00	Capital Stock	$100,000.00
Inventories	32,000.00	Accounts Payable	31,610.00
Accounts Receivable ..	47,500.00	Reserve for Bad Debts	1,940.00
Cash	1,000.00		
Deficit	2,050.00		
	$133,550.00		$133,550.00

The contract provides, in settlement for the properties and businesses acquired, that preferred stock be issued in each case to the extent of the excess of the asset values, as stated, over the liabilities, and that an equal amount of common stock be issued in payment for the good-will.

Draft opening entries of Corporation C, and prepare balance sheet.

(New York C. P. A. Examination.)

Solution to Problem 67

Cash	$ 500.00	
Common Stock		$ 500.00
Issue of 5 shares of common stock for cash.		
Cash	3,000.00	
Plant and Sundry Assets	222,000.00	
Accounts Payable		14,200.00
Corporation A, Vendor		210,800.00
Purchase of plant and assets of Corporation A in accordance with contract approved by board of directors.		
Corporation A, Vendor	210,800.00	
Preferred Stock		105,400.00
Common Stock		105,400.00
Payment of balance due.		
Cash	1,000.00	
Plant and Sundry Assets	228,450.00	
Accounts Payable		31,610.00
Reserve for Bad Debts		1,940.00
Corporation B, Vendor		195,900.00
Purchase of plant and assets of Corporation B in accordance with contract approved by board of directors.		
Corporation B, Vendor	195,900.00	
Preferred Stock		97,950.00
Common Stock		97,950.00
Payment of balance due.		

Plant and Machinery	86,000.00	
Raw Material	6,500.00	
Work in Process	9,200.00	
Finished Product	16,700.00	
Inventories (B)	32,000.00	
Accounts Receivable (per schedule)	81,000.00	
Bills Receivable	14,500.00	
Deferred Charges	1,200.00	
Good-Will	203,350.00	
Plant and Sundry Assets		450,450.00
To set up valuation of assets made by board of directors.		

CORPORATION C

BALANCE SHEET

Assets

Capital Assets:			
Good-Will		$203,350.00	
Plant and Machinery		86,000.00	
Total			$289,350.00
Current Assets:			
Inventories		$ 64,400.00	
Accounts Receivable	$81,000.00		
Less—Reserve for Bad Debts	1,940.00	79,060.00	
Notes Receivable		14,500.00	
Cash		4,500.00	
Total			162,460.00
Deferred Charges			1,200.00
Total			$453,010.00

Liabilities and Capital

Capital Stock:		
Preferred Stock	$203,350.00	
Common Stock	203,850.00	
Total		$407,200.00
Current Liabilities:		
Accounts Payable		45,810.00
Total		$453,010.00

Points Illustrated in Problem 67

(a) Consolidation by Purchase. As explained in Volume IV, Chapter XXVIII, § 2, one method of consolidating corporations is through the purchase of one or more companies by a newly organized corporation. The economic, legal, and accounting principles involved in this method of consolidation are discussed in Volume IV, Chapter XXVIII.

(b) Opening Entry for Corporation. This problem illustrates a set of opening entries for a corporation which are made in accordance with the procedure described in Volume I, Chapter XXXIII, § 8.

(c) Plant and Sundry Assets. The use of a Plant and Sundry Assets account where a corporation acquires various assets, tangible and intangible, is described in Volume I, Chapter XXXIII, § 8. The object of using such an account is to place the responsibility for the valuation of specific assets upon the board of directors.

(d) Valuation of Good-Will. The method employed in this problem for valuing the good-will of the two companies is only one of the methods outlined in Volume IV, Chapter XIX, § 4.

(e) Reserve for Bad Debts. The reserve for bad debts is deducted on the balance sheet from the gross amount of accounts receivable. This is in accordance with the practice which is recommended in Volume I, Chapter XXIX, § 11.

(f) Purchase of Deferred Charges. In this example the new corporation acquired, among the assets purchased, deferred charges previously carried by Corporation A. Unless the deferred charges represented an organization expense of Corporation A, they may be presumed, from the statement of the problem, to be a current item such as prepaid insurance or the like. In that event, it is properly chargeable as an asset in the accounts of the new corporation.

Problem 68

In January 15, 1901, Howard Robinson and four others acquired a tract of 600 acres at a cost of $20,000. On March 1, 1901, they incorporate the Nob Hill Realty Company for the purpose of acquiring, sudividing, and selling this tract for residence purposes.

The par value of the stock is $100 per share, the capital $300,000, of which $120,000 is issued for the land purchased, and the balance $180,000 is paid for in cash. The directors engage a landscape architect to lay out the tract, a special feature of which is to be a beautiful park, together with tree-lined boulevards and driveways. In accord with the architects' advice the directors defer marketing any portion of the property until the year 1911.

Owing to errors in early development work the company is compelled to borrow $50,000 at 6% on March 1, 1910. The loan is secured by a mortgage on the entire property, with the customary release clause for individual lots upon payment of $25,000 of the loan, and $1,000 on each lot for which release is demanded.

Sales of lots are made beginning March 1, 1911.

The sale contract provides that the company will maintain the park and driveways in perpetuity and to insure this a fund will be created for the permanent maintenance and care of the park and driveways, the estimated annual expense of which is $6,000. It is agreed with purchasers of lots that one-third of all cash received from sales shall be invested in sound bonds yielding 4% net, until $150,000 has been so invested. It is further agreed that upon the sale of all the lots, the bonds will be turned over to a board of trustees to be elected by lot-owners and designated trustees of Nob Hill Park, who shall take over the management of the park and driveways.

In November, 1916, Robinson dies and as a result of the inquiries made by the accountant for the executor, the following facts appear with respect to the financial affairs and accounts of the Nob Hill Realty Company:

It has been the practice of the directors to buy bonds after the close of each fiscal year. The books are in balance, but the total cost of the investment is not recorded and no entries appear with respect to the park fund for permanent maintenance from which the bonds were to be purchased.

The tract consists of 400 lots of different sizes, but all of the same selling price. On February 28, 1917, 40 lots are left unsold, sales of which will probably be consummated during the spring and summer of 1917.

Cash dividends have been declared and paid, but nobody appears to know what portion of dividends were earned, and what portion represents liquidating dividends, if any. The accountant draws off two trial balances, as follows:

TRIAL BALANCES

	Mar. 1, 1911	Feb. 28, 1917
Debits:		
Cash on Hand	$ 16,000.00	$ 252,000.00
Bonds	....	100,000.00
Real Estate	120,000.00	120,000.00
Improvements	160,000.00	160,000.00
Improvements Replaced	60,000.00	60,000.00
General Expense	24,000.00	84,000.00

	Mar. 1, 1911	Feb. 28, 1917
Park and Driveway Maintenance	....	36,000.00
Dividends Paid	....	430,000.00
	$380,000.00	$1,242,000.00
Credits:		
Capital Stock	$300,000.00	$ 300,000.00
Sale of Lots	....	900,000.00
Bond Interest	....	12,000.00
Interest (on call loans)	30,000.00	30,000.00
Mortgage	50,000.00	
	$380,000.00	$1,242,000.00

From the foregoing data prepare journal entries, profit and loss account for the period, and balance sheet as of February 28, 1917.

(California C. P. A. Examination.)

Solution to Problem 68

March 1, 1901

The Nob Hill Realty Company has been incorporated this day with an authorized capital stock of $300,000, divided into 3,000 shares of the par value of $100 each.

Real Estate	$120,000.00	
Cash	180,000.00	
Capital Stock		$300.000.00
To record the acquirement of real estate and the receipt of cash in exchange for 3,000 shares of capital stock March 1, 1910.		
Cash	50,000.00	
Mortgage		50,000.00
A loan of $50,000 is secured by a mortgage on the entire property. Interest on mortgage, 6%.		

Improvements	160,000.00	
Improvements Replaced	60,000.00	
Cash		220,000.00
To show expenditure of cash for improvement of real estate.		
Cash	30,000.00	
Interest		000.00
$30,000 interest received on call loans.		
General Expenses	24,000.00	
Cash		24,000.00
To record expenses incurred and paid up to March 1, 1911.		

The foregoing entries are set up to show such transactions as occurred from the time of incorporation to March 1, 1911.

In order to show the total cost of the investment, the accounts with Improvements and Improvements Replaced should be closed into the Real Estate account.

Also, inasmuch as the property had not been a source of income up to March 1, 1911, any expenses incurred prior to such date may rightly be capitalized and any incidental income might be considered a reduction of the cost of the property.

Hence the three following entries:

Real Estate	$220,000.00	
Improvements		$160,000.00
Improvements Replaced		60,000.00
To add to the cost of real estate such items as represent permanent improvements on the property.		
Real Estate	24,000.00	
General Expense		24,000.00
To capitalize expenses incurred on property prior to March 1, 1911.		

Interest (on call loans)	30,000.00	
Real Estate		30,000.00
To close Interest account into the investment, showing a reduction of cost of property.		

Entries to show transactions from March 1, 1911, to February 28, 1917:

Cash	$900,000.00	
Sales of Lots		$900,000.00
To record the sale of 360 lots at $2,500 each.		
Park and Driveway Maintenance	36,000.00	
General Expense	60,000.00	
Cash		96,000.00
Expenses incurred from March 1, 1911, to February 28, 1917.		
Bonds	100,000.00	
Cash		100,000.00
To record purchase of bonds for permanent maintenance of park.		
Cash	12,000.00	
Bond Interest		12,000.00
To show income from bonds purchased for investment.		
Mortgage	50,000.00	
Cash		50,000.00
To show the taking up of the mortgage placed on the property.		
Dividends Paid	430,000.00	
Cash		430,000.00
To record payment of dividends to stockholders.		

Since no distinct accounts have been kept for the park fund for permanent maintenance, the following entries seem necessary:

Park Fund—Bonds	$100,000.00	
Bonds		$100,000.00
To close the Bond account now on books and set up in place thereof a park fund investment account.		
Park Fund—Cash	50,000.00	
Cash		50,000.00
To bring the park fund investment up to the amount called for in the agreement with land owners.		
Park Fund—Expense and Income	36,000.00	
Park and Driveway Maintenance		36,000.00
To close park and driveway maintenance expenses into the Expense and Income account.		
Bond Interest	12,000.00	
Park Fund—Expense and Income		12,000.00
To close income from bonds into Expense and Income account.		
Sales of Lots	24,000.00	
Park Fund—Expense and Income		24,000.00
To transfer debit balance of Expense and Income account to Sales account.		

NOTE: The excess of expenses over income with respect to the maintenance of the property must be considered a reduction of the income from sales until such time as the permanent fund is sufficiently large to carry the burden of maintaining the property.

The following entries are to close the books as of February 28, 1917.

Sales of Lots		$300,600.00	
Real Estate			$300,600.00
Total value of real estate per balance of account	$334,000.00		
40 lots at $835 unsold	33,400.00		
Cost of lots sold	$300,600.00		

Sales of Lots	575,400.00	
Profit and Loss		575,400.00
To close Sales account showing gross profit into Profit and Loss account.		
Surplus	150,000.00	
Reserve for Park Maintenance		150,000.00
To establish a reserve account against the amount of $150,000 which is to be turned over to the Nob Hill trustees. (NOTE: This amount must be taken out of Surplus in order to prevent its use for dividend distribution.)		
Surplus	365,400.00	
Dividends in Liquidation	64,600.00	
Dividends Paid		430,000.00
To close Dividends Paid into Surplus and into Dividends in Liquidation.		

The Surplus account having a balance of only $365,400, it is clear that the remaining $64,600 paid to stockholders represents a liquidation of the capital stock.

The source of income from this property since its incorporation, March 1, 1901, namely, the sale of lots, is not permanent. Hence when all the lots are sold, no further dividends will accrue to the stockholders. As dividends paid to date by the Nob Hill Realty Company to its stockholders have exceeded the available surplus, it must be considered that such dividends are a liquidation of the shares in the hands of stockholders.

Mining properties and timber tracts are similar in nature to real estate subdivisions in that the working of the property represents a continuous diminution of the property valuation.

NOB HILL REALTY COMPANY

PROFIT AND LOSS ACCOUNT

March 1, 1911, to February 28, 1917

Sales of Lots	$900,000.00	
Less—Balance of Maintenance Expense Account	24,000.00	
Net Sales		$876,000.00
Deduct—Cost of Lots Sold (360 lots at $835)		300,600.00
Gross Profit		$575,400.00
Deduct—General Expenses		60,000.00
Net Profit for Period		$515,400.00

NOB HILL REALTY COMPANY

BALANCE SHEET

February 28, 1917

Assets

Real Estate (40 salable lots at $835)		$ 33,400.00	
Cash		202,000.00	
Park Fund:			
Bonds	$100,000.00		
Cash	50,000.00	150,000.00	
Total Assets			$385,400.00

Capital

Capital Stock	$300,000.00	
Less—Dividends in Liquidation	64,600.00	$235,400.00
Reserve for Park Maintenance		150,000.00
Total Capital		$385,400.00

Points Illustrated in Problem 68

(a) Wasting Assets. For a discussion of the nature of wasting assets, see Volume IV, Chapter XVII, § 8.

(b) Liquidating Dividends. The conditions under which corporate dividends may be in part liquidating dividends are described in Volume IV, Chapter XVII, § 8. This problem illustrates a partial liquidation and the method of stating the stockholdings indented on the balance sheet.

(c) Funds. For a discussion of the nature of funds, see Volume IV, Chapter VIII, § 3.

(d) Reserves. A discussion of reserves and the uses to which they may be put will be found in Volume IV, Chapter VIII.

(e) Organization Expense. All legitimate expenses incurred during the organization period of a business may properly be capitalized, that is to say, they may be charged either to the cost of any fixed asset in connection with which they may have been incurred, or they may be carried as an intangible asset under some caption such as organization expense. There can properly be no operating expenses until the organization has been completed. (See Volume IV, Chapter II, § 5.)

Problem 69

Prepare a statement of the operations of a railroad company (using your own figures) and show the profit and loss account after providing for an amortization of 5% of the gross earnings; also state the assets and liabilities of the company.

(*Pennsylvania C. P. A. Examination.*)

Solution to Problem 69*

In presenting the statement of the operations of a railroad company, it is desirable that the account classification as prescribed by the Interstate Commerce Commission be followed closely. With that in mind, the following is submitted:

*Solution by E. P. Moxey, C. P. A.

THE NORTH AND SOUTH RAILROAD COMPANY

INCOME ACCOUNT

For the Year Ended June 30, 1914

Railway Operating Income:		
Rail Operations—Revenues		$59,682,777.77
Rail Operations—Expenses		44,782,708.27
Net Revenue—Rail Operations		$14,900,069.50
Outside Operations—Revenues	$ 402,523.22	
Outside Operations—Expenses	377,404.61	
Net Revenue—Outside Operations		25,118.61
Net Railway Operating Revenue		$14,925,188.11
Railway Tax Accruals		2,600,288.42
Railway Operating Income		$12,324,899.69
Other Income:		
Income from Lease of Road	$ 218,545.90	
Hire of Equipment—Credit Balance	393,218.19	
Joint Facility—Rent Income	259,555.56	
Miscellaneous Rent Income	28,450.79	
Net Profit from Miscellaneous Physical Property	81,962.58	
Dividend Income	915,313.89	
Income from Funded Securities	224,780.40	
Income from Unfunded Securities and Accounts	691,149.82	
Total Other Income		2,812,977.13
Gross Income		$15,137,876.82
Deductions from Gross Income:		
Deductions for Lease of Other Roads	$ 163,376.27	
Joint Facility—Rent Deductions	588,267.00	
Miscellaneous Rent Deductions	47,510.26	
Separately Operated Properties—Loss	25,291.00	
Interest Deductions for Funded Debt	7,123,932.90	
Interest Deductions for Unfunded Debt	13,605.88	
Miscellaneous Deductions	91,731.76	
Total Deductions		8,053,715.07
Net Income		$ 7,084,161.75

Disposition of Net Income:		
Appropriations of Income to Sinking Funds	$ 201,023.17	
Reserve for Doubtful Accounts	204,252.08	405,275.25
Income Balance transferred to Credit of Profit and Loss		$ 6,678,886.50

PROFIT AND LOSS ACCOUNT

Credits

Balance, July 1, 1913	$40,743,870.09	
Credit Balance transferred from Income Account	6,678,886.50	
Delayed Income Credits	95,219.25	
Miscellaneous Credits	2,656,266.96	$50,174,242.80

Debits

Dividend Appropriations of Surplus:			
Cash Dividend, 3½%, payable February 10, 1914		$ 2,520,000.00	
Cash Dividend, 3½%, payable August 10, 1914		2,520,000.00	
		$ 5,040,000.00	
Debt Discount Extinguished through Surplus	$273,687.50		
Less—Premium Realized on Bonds sold during year ..	175,000.00	98,687.50	
Miscellaneous Debits:			
Amount appropriated to Reserve for Additions to Property—being 5% of Gross Earnings from Rail Operations, viz., 5% of $59,682,777.77		2,984,138.89	
Balance Credit, June 30, 1914		42,051,416.41	$50,174,242.80

GENERAL BALANCE SHEET

Assets

PROPERTY INVESTMENTS:		
Road and Equipment:		
Investment to June 30, 1907:		
Road..................................	$139,471,342.11	
Equipment..........................	36,072,004.83	$175,543,346.94

Investment since June 30, 1907:				
Road		$ 49,943,854.36		
Equipment		16,331,026.69	66,274,881.05	
			$241,818,227.99	
Reserve for Accrued Depreciation—Credit:				
Way and Structures, etc.		$ 9,974,264.55		
Equipment		17,439,335.40	27,413,599.95	$214,404,628.04
SECURITIES:				
Proprietary, Affiliated, and Controlled Companies:				
Pledged:				
Stocks		$ 250,728.48		
Funded Debt		1,200,000.00	$ 1,450,728.48	
Issued or Assumed—Pledged—Funded Debt			3,929,000.00	
Unpledged:				
Stocks		$ 3,030,592.65		
Funded Debt	$1,900,282.83			
Miscellaneous	172,276.00	2,072,558.83	5,103,151.48	10,482,879.96
OTHER INVESTMENTS:				
Advances to Proprietary, Affiliated and Controlled Companies for Construction, Equipment and Betterments			$ 18,912,919.28	
Miscellaneous Investments:				
Physical Property		$ 3,220,078.08		
Securities—Pledged		14,662,472.37		
Securities—Unpledged:				
Stocks	$4,288,753.08			
Miscellaneous	16,442.44	4,305,195.52	22,187,745.97	41,100,665.25
WORKING ASSETS:				
Cash			$ 13,815,564.10	
Securities Issued or Assumed—Held in Treasury—Funded Debt			10,644,339.94	
Marketable Securities			6,786,768.75	
Loans and Bills Receivable			214,234.85	
Traffic and Car Service Balances Due from Other Companies			496,297.44	
Net Balance Due from Agents and Conductors			988,523.58	
Miscellaneous Accounts Receivable			3,174,412.88	
Materials and Supplies			7,086,383.22	43,206,524.76
ACCRUED INCOME NOT DUE:				
Unmatured Interest, Dividends, and Rents Receivable				50,872.90
DEFERRED DEBIT ITEMS:				
Advances:				
Temporary Advances to Proprietary, Affiliated and Controlled Companies		$ 927,206.49		
Working Funds		191,417.27	$ 1,118,623.76	
Taxes Paid in Advance			28,258.27	
Special Deposits			500,005.00	

Cash and Securities in Sinking and Redemption Funds:			
Company Bonds	$ 1,027,000.00		
Cash, etc.	79,629.86	1,106,629.86	
Other Deferred Debit Items		1,301,191.65	4,054,708.54
			$313,300,279.45

Liabilities

Stock:			
Capital Stock:			
Common Stock:			
Full Shares Outstanding		$ 71,917,200.00	
Fractional Shares Outstanding		720.00	
Original Stock and Subsequent Stock Dividends Unissued		82,080.00	
		$ 72,000,000.00	
Premium Realized on Capital Stock		12,116.76	$ 72,012,116.76
Mortgage, Bonded, and Secured Debt:			
Funded Debt:			
Mortgage and Collateral Trust Bonds:			
Owned by Company	$ 16,100,339.94		
Outstanding in Hands of Public	168,341,000.00	$184,441,339.94	
Plain Bonds, Debentures, and Notes		21,857.00	184,463,196.94
Working Liabilities:			
Traffic and Car Service Balances Due to Other Companies		$ 288,551.54	
Audited Vouchers and Wages Unpaid		2,782,527.38	
Miscellaneous Accounts Payable		541,189.92	
Matured Interest, Dividends, and Rents Unpaid		1,257,811.17	
Matured Mortgage, Bonded, and Secured Debt Unpaid		95,000.00	
Other Working Liabilities		472,310.28	5,437,390.29
Accrued Liabilities Not Due:			
Unmatured Interest, Dividends, and Rents Payable		$ 3,496,321.88	
Taxes Accrued		1,191,425.77	4,687,747.65
Deferred Credit Items:			
Operating Reserves		$ 439,254.65	
Other Deferred Credit Items		934,563.78	1,373,818.43
Appropriated Surplus:			
Additions to Property since June 30, 1907, through Income or Surplus		$ 2,984,138.89	
Reserves from Income or Surplus:			
For Doubtful Accounts		290,454.08	3,274,592.97
Profit and Loss:			
Balance			42,051,416.41
			$313,300,279.45

Points Illustrated in Problem 69

(a) Special Statement Forms. This problem illustrates the use of specialized forms in compliance with legal requirements. Whatever theories an accountant may hold in regard to the form, when he prepares a statement for a railroad company or for any other similarly regulated industry, he must follow the prescribed forms. The usual form of profit and loss statements and balance sheets is described in Volume I, Chapters IX and XI, and in Volume IV, Part IV.

(b) Extraneous Operations. The profit and loss resulting from operations outside of the conduct of the main business of railroading are shown separately on the statement. This is in accordance with the general principle of statement preparation explained in Volume I, Chapter IX, § 12.

(c) Sinking Fund and Sinking Fund Reserves. The principles underlying sinking funds and their offsetting reserves are discussed in Volume IV, Chapters VIII and XI.

(d) Analyzed Surplus. In this case the surplus is analyzed so as to show the portion of it which has been appropriated by means of reserve accounts. For a discussion of the creation of such reserves, see Volume IV, Chapter VIII.

(e) Dividends. This problem illustrates the charging of dividends against surplus, which in this case is called Profit and Loss account. The real nature of dividends as distributions of surplus appears in this solution. (See Volume IV, Chapter V.)

(f) Discount on Bonds. In this solution there is illustrated the absorption or gradual writing off of discounts on bonds. For a discussion of this point see Volume IV, Chapter X, § 10.

(g) Reserve for Depreciation. The desirability of deducting reserves for depreciation from the book value of the assets to which they apply has been discussed in Volume I, Chapter XXIX, § 4.

(h) Working Capital. As explained in Volume I, Chapter XI,

§ 14, working capital is the excess of current assets over current liabilities. In this problem the current assets and liabilities are called "working" assets and liabilities. The excess of the former over the latter is clearly indicated by the form of balance sheet shown.

(i) Accrued Liability. This problem illustrates the necessity for recording accrued liabilities, as explained in Volume IV, Chapter III, § 1.

(j) Deferred Debits and Credits. The deferring of debits and credits which affect subsequent periods is explained in Volume IV, Chapters II and III.

Problem 70

From the trial balance of the Wonder Machine Shoe Company prepare a balance sheet and statement with sections showing manufacturing costs, trading results, and profit and loss.

Reserve for the depreciation of machinery, 10%; of tools, 10%; of lasts and patterns, 20%. Reserve for loss from bad debts an amount that, when added to the reserve for that purpose already in force, will make the sum 1% of the book accounts.

TRIAL BALANCE

December 31, 1919

Real Estate	$ 81,035.00
Machinery and Equipment	57,750.00
Tools	5,259.00
Lasts and Patterns	35,260.00
Office Equipment	3,396.00
Raw Materials Inventory, January 1, 1919	14,378.40
Goods in Process, January 1, 1919	23,631.50

Finished Goods, January 1, 1919	$ 15,686.31	
Accounts Receivable	62,316.50	
Bills Receivable	4,388.45	
Cash	22,902.63	
Good-Will	30,000.00	
Reserve for Depreciation of Lasts and Patterns		$ 15,411.75
Reserve for Bad Debts		361.22
Accounts Payable		18,580.70
Bills Payable		6,500.00
Capital Stock		200,000.00
Surplus		7,329.46
Mortgages Payable		20,000.00
Sales		419,752.35
Discount on Purchases		7,290.40
Factory Supplies	8,817.62	
Raw Material Purchased	145,481.69	
Labor	110,371.84	
Freight Inward	1,845.25	
Indirect Labor	5,193.00	
Manufacturing Expenses	14,280.30	
Selling Expenses	25,792.65	
General Expenses	16,123.75	
Interest	110.60	
Allowances to Customers	552.25	
Discount on Sales	8,818.75	
Collection and Exchange	340.81	
Returned Sales	1,493.58	
	$695,225.88	$695,225.88

INVENTORIES

December 31, 1919

Raw Materials	$ 5,397.24
Factory Supplies	820.20
Fuel	1,592.17
Goods in Process	18,493.12
Finished Goods	8,898.61
Interest Accrued on Notes Held	37.00
Interest Accrued on Notes Outstanding	55.00

Solution to Problem 70

WONDER MACHINE SHOE COMPANY

ADJUSTING ENTRIES

December 31, 1919

Depreciation of Machinery	$5,775.00	
Reserve for Depreciation of Machinery		$5,775.00
To record 10% reserve for the year ending December 31, 1919.		
Depreciation of Tools	525.90	
Reserve for Depreciation of Tools		525.90
To record 10% reserve for the year ending December 31, 1919.		
Depreciation of Lasts and Patterns	7,052.00	
Reserve for Depreciation of Lasts and Patterns		7,052.00
To record 20% depreciation for year ending December 31, 1919.		
Provision for Loss on Bad Debts	261.95	
Reserve for Loss on Bad Debts		261.95
To record Reserve for Loss on Bad Debts amounting to 1% of book value.		
Factory Supplies on Hand	820.20	
Factory Supplies		820.20
To deduct supplies on hand from the expense account.		
Fuel on Hand	1,592.17	
Manufacturing Expense		1,592.17
To deduct from Manufacturing Expense, the fuel on hand, December 31, 1919.		
Interest on Notes Receivable Accrued	37.00	
Interest on Notes Receivable		37.00
To record interest due us on notes held December 31, 1919.		
Interest	55.00	
Interest on Notes Payable Accrued		55.00
To record interest due on notes outstanding.		

WONDER MACHINE SHOE COMPANY

Exhibit A

BALANCE SHEET

December 31, 1919

Assets

Fixed Assets:			
Real Estate		$81,035.00	
Machinery and Equipment	$57,750.00		
Less—Reserve for Depreciation	5,775.00	51,975.00	
Tools	$ 5,259.00		
Less—Reserve for Depreciation	525.90	4,733.10	
Lasts and Patterns	$35,260.00		
Less—Reserve for Depreciation	22,463.75	12,796.25	
Office Equipment		3,396.00	$153,935.35
Current Assets:			
Accounts Receivable	$62,316.50		
Less—Reserve for Loss on Bad Debts	623.17	$61,693.33	
Bills Receivable		4,388.45	
Cash		22,902.63	88,984.41
Good-Will			30,000.00
Inventories:			
Raw Materials		$ 5,397.24	
Goods in Process		18,493.12	
Finished Goods		8,898.61	
Factory Supplies		820.20	
Fuel		1,592.17	35,201.34
Accrued Items:			
Interest on Notes Receivable Accrued			37.00
Total Assets			$308,158.10

Liabilities and Capital

Fixed Liabilities:			
Mortgage Payable			$ 20,000.00
Current Liabilities:			
Accounts Payable		$18,580.70	
Bills Payable		6,500.00	25,080.70
Accrued Items:			
Interest on Notes Payable Accrued			55.00
Capital Stock			200,000.00
Surplus:			
Balance of Surplus, December 31, 1919		$ 7,329.46	
Add—Net Profit for period		55,692.94	63,022.40
Total Liabilities and Capital			$308,158.10

WONDER MACHINE SHOE COMPANY

Exhibit B

PROFIT AND LOSS STATEMENT

For the Year Ending December 31, 1919

Net Sales of Manufactured Goods:			
Sales		$419,752.35	
Less—Returned Sales		1,493.58	$418,258.77
Deduct—Cost of Manufactured Goods Sold:			
On Hand, January 1, 1919	$ 15,686.31		
Cost of Goods Manufactured during year (See Exhibit C)	311,049.77	$326,736.08	
Deduct—On Hand, December 31, 1919		8,898.61	317,837.47
Gross Profit on Sale of Manufactured Goods			$100,421.30
Deduct:			
Selling Expense		$ 25,792.65	
General Expense		16,123.75	41,916.40
Net Trading Profit			$ 58,504.90

Add—Other Income:		
Interest on Notes Receivable	$ 37.00	
Discount on Purchases	7,290.40	7,327.40
Total Income		$ 65,832.30
Deduct—Other Charges:		
Interest	$ 165.60	
Allowances to Customers	552.25	
Discount on Sales	8,818.75	
Collection and Exchange	340.81	
Provision for Loss on Bad Debts	261.95	10,139.36
Net Profit		$ 55,692.94

WONDER MACHINE SHOE COMPANY

Exhibit C

STATEMENT SHOWING COST OF GOODS MANUFACTURED

For the Year Ending December 31, 1919

Raw Materials Used:			
On Hand, January 1, 1919	$ 14,378.40		
Purchases	145,481.69		
Freight Inward	1,845.25	$161,705.34	
Deduct—On Hand, December 31, 1919		5,397.24	$156,308.10
Labor			110,371.84
Manufacturing Expenses:			
Manufacturing Expenses		$ 12,688.13	
Indirect Labor		5,193.00	
Factory Supplies		7,997.42	
Depreciation of Machinery		5,775.00	
Depreciation of Tools		525.90	
Depreciation of Lasts and Patterns		7,052.00	39,231.45
Total Manufacturing Charges			$305,911.39
Add—Goods in Process, January 1, 1919			23,631.50
			$329,542.89
Deduct—Goods in Process, December 31, 1919			18,493.12
Net Cost of Goods Manufactured			$311,049.77

Points Illustrated in Problem 70

(a) Manufacturing Statements. This problem illustrates the form of reports for manufacturing businesses. (See Volume IV, Chapter XXIII.)

(b) Subsidiary Statements. As explained in Volume I, Chapter XIV, the use of subsidiary statements is advisable when there is more information to be shown than can conveniently be displayed in one statement. In this problem the use of subsidiary statements is illustrated.

(c) Bills Receivable and Payable. In Volume I, Chapter XXVII, § 3, the use of this terminology is criticized and the reason for its use is explained.

(d) Reserve for Bad Debts. The reserve for bad debts in this case is calculated upon the amount of accounts receivable outstanding. It is generally preferable to relate this reserve to the volume of sales rather than to the accounts outstanding. (See Volume IV, Chapter XVI, § 2.)

(e) Depreciation. The rates used for depreciation in this case are generally reasonable. As explained in Volume I, Chapter XXIX, § 6, the determination of the rate is more of an engineering matter than one of accounting. Where a fixed annual percentage is written off from the book value of the account without any adjustment of that book value for previous depreciation, the method is known as the straight-line method. If the percentage is written off from the balance of the account after adjustment for previous depreciation, the percentage of diminishing value method is the one employed.

(f) Accrued Liabilities. This problem illustrates the setting up of accrued liabilities. The necessity for this is explained in Volume IV, Chapter III, § 1.

(g) Tie-Up of Statements. In this solution the balance sheet and the statement of profit and loss are definitely related so that one checks the other. The desirability of this is explained in Volume IV, Chapter XXI, § 13.

Problem 71

The fiscal year of a manufacturing company ends June 30, 1908, and the bookkeeper presents a statement to the directors made up in the following form:

Gross Sales	$285,000.00	
Increase of Inventory	15,000.00	$300,000.00
Cost of Sales:		
Operating Expenses, Material and Supplies	$257,000.00	
Plant Expense	12,000.00	
Freight on Returned Goods	600.00	
Sundry Purchases Finished Goods	10,400.00	280,000.00
Manufacturing Profit		$ 20,000.00
Other Income:		
Miscellaneous Earnings	$ 1,500.00	
Profit on Contracts	6,500.00	
Discount on Purchases	500.00	8,500.00
		$ 28,500.00
Less:		
Discount on Sales	$ 2,875.00	
Rebates and Allowances	1,125.00	4,000.00
Net Plant Profit		$ 24,500.00
Less:		
General Expenses	$ 5,500.00	
Interest	1,500.00	7,000.00
Net Profit		$ 17,500.00

You are required to make up a profit and loss statement in regular form, showing purchases, etc., and using such of the above figures as may be necessary, together with these following: Inventory June 30, 1907: material $115,000; supplies $35,000; finished goods $45,000. Inventory, June 30, 1908: material $140,000; supplies $10,000; finished goods $60,000. Material used in factory during the year, $75,000. Wages $122,500;

fuel $2,500; repairs and renewals $2,000. Other operating expenses $55,000, which includes $25,000 supplies used.

(*Massachusetts C. P. A. Examination.*)

Solution to Problem 71

THE MANUFACTURING COMPANY

STATEMENT SHOWING COST OF MANUFACTURED GOODS SOLD

July 1, 1907, to June 30, 1908

Cost of Materials Used:				
Inventory, July 1, 1907	$115,000.00			
Add—Purchases	100,000.00	$215,000.00		
Less—Inventory, June 30, 1908		140,000.00	$ 75,000.00	
Wages			122,500.00	
Total Prime Cost				$197,500.00
Add—Manufacturing Expenses:				
Fuel			$ 2,500.00	
Repairs and Renewals			2,000.00	
Factory Supplies Used:				
Inventory, July 1, 1907		$ 35,000.00		
Less—Inventory, June 30, 1908		10,000.00	25,000.00	
Plant Expense			12,000.00	
Factory Operating Expenses			30,000.00	71,500.00
Total Cost of Goods Manufactured				$269,000.00
Add:				
Finished Goods Inventory, July 1, 1907			$ 45,000.00	
Sundry Purchases of Finished Goods			10,400.00	55,400.00
				$324,400.00
Less—Inventory Finished Goods, June 30, 1908				60,000.00
Cost of Goods Sold				$264,400.00

THE MANUFACTURING COMPANY

PROFIT AND LOSS STATEMENT

July 1, 1907, to June 30, 1908

Gross Sales		$285,000.00	
Less—Returned Goods		1,125.00	
Net Sales			$283,875.00
Deduct—Cost of Goods Sold			264,400.00
Gross Profit on Sales			$ 19,475.00
Add:			
Miscellaneous Earnings		$ 1,500.00	
Profit on Contracts		6,500.00	8,000.00
Total Operating Profit			$ 27,475.00
Deduct:			
General Expenses		$ 5,500.00	
Freight on Returned Goods		600.00	6,100.00
Net Profit from Operations			$ 21,375.00
Deduct—Net Balance of Interest and Discount Items:			
Interest Charges	$1,500.00		
Discount on Sales	2,875.00	$ 4,375.00	
Less—Discount on Purchases		500.00	3,875.00
Net Profit			$ 17,500.00

Points Illustrated in Problem 71

(a) Manufacturing Statements. This problem illustrates the preparation of statements for a manufacturing business. (See Volume IV, Chapter XXIII.)

(b) Subsidiary Schedules. The use of subsidiary schedules is explained in Volume I, Chapter XIV.

(c) Form of Profit and Loss Statement. The form of statement used in this solution differs somewhat from that in general use. As explained in Volume I, Chapter IX, § 6, the selection of a form should be made with the sole view of practicability. That form should be adopted in each case which will be most intelligible to the persons who are to use it.

Problem 72

A company of typewriter manufacturers makes up its accounts on December 31, 1907, for the year. The following are the debits to the Profit and Loss account:

Raw Material on Hand, January 1, 1907	$12,500.00
Finished Machines on Hand, January 1 (1,600 at $30)	48,000.00
Purchases of Material	62,500.00
Labor, Productive	82,500.00
Manufacturing Expenses	23,000.00
Agents' Commissions	90,000.00
Branch House Expenses	40,000.00
Selling Expenses	30,000.00
Bad Debts	8,000.00
Depreciation on Machinery and Plant	5,500.00

The sales for the year were 6,000 machines, yielding $540,000; the raw material on December 31, 1907, at cost, was $4,000; and the finished machines in stock ready for sales numbered 800.

Prepare an income and profit and loss statement.

(*Michigan C. P. A. Examination.*)

Solution to Problem 72

INCOME AND PROFIT AND LOSS STATEMENT

For the Year Ended December 31, 1907

Sales			$540,000.00
Deduct—Cost of Goods Sold:			
Finished Goods on Hand, January 1, 1907	$ 48,000.00		
Add—Cost of Goods Manufactured (per Manufacturing Statement)	182,000.00	$230,000.00	
Deduct—Inventory, December 31, 1907, (800 machines at $35)		28,000.00	202,000.00
Gross Profit on Sales			$338,000.00

Deduct Expenses:		
Selling Expenses	$ 30,000.00	
Agents' Commissions	90,000.00	
Branch House Expenses	40,000.00	160,000.00
Profit from Operation		$178,000.00
Deduct—Other Charges:		
Bad Debts		8,000.00
Net Profit		$170,000.00

STATEMENT SHOWING COST OF GOODS MANUFACTURED

For the Year Ended December 31, 1907

Raw Materials Used:			
Inventory, January 1	$12,500.00		
Add—Purchases	62,500.00	$75,000.00	
Deduct—Inventory, December 31		4,000.00	$ 71,000.00
Productive Labor			82,500.00
Prime Cost			$153,500.00
Manufacturing Expenses		$23,000.00	
Depreciation of Machinery and Plant		5,500.00	28,500.00
Cost of Goods Manufactured			$182,000.00

Cost per Machine

Machines on hand, December 31, 1907	800	
Sold during the year	6,000	6,800
On hand, January 1, 1907		1,600
Manufactured during year		5,200

5,200 machines costing $182,000 to manufacture represent a cost of $35 per machine.

There being no goods in process recorded, it may be assumed that the amount $182,000 represents cost of finished goods. Also, for the purposes of this problem it is correct to consider that all of the 1,600 machines on hand at the beginning of the year, which machines cost $30 each to make, have been sold and that the 800 machines on hand December 31 are such as were completed during the year at a cost of $35 each.

Points Illustrated in Problem 72

(a) Manufacturing Statements. As explained in Volume IV, Chapter XXIII, the form of statements for manufacturing businesses is somewhat different from those convenient for mercantile businesses. In this problem the former type of statements is illustrated.

(b) Subsidiary Schedules. The use of subsidiary schedules where the information to be shown is too voluminous to be incorporated in one statement is explained in Volume I, Chapter XIV.

Problem 73

The following is a trial balance June 30, 1916, before closing, of the ledger of a textile mill:

Land	$ 10,000.00
Buildings	75,000.00
Machinery	119,138.73
Tenements	1,670.66
Finished Goods Inventory, January 1, 1916	66,984.43
Stock in Process Inventory, January 1, 1916	57,042.38
Yarn	259,882.12
Cash	12,769.19
Petty Cash	106.39
Accounts Receivable	46,085.68
Mortgage Receivable	875.00
Labor	25,979.27
Supplies	2,974.31

Repairs	956.63	
Oils	50.84	
Coal	1,443.20	
Starch	1,390.00	
Water	122.65	
Finishing	15,381.54	
Brokerage	660.50	
Commission	4,580.67	
Discounts Allowed	1,246.84	
Insurance	679.92	
Taxes	1,502.81	
General Expense	389.39	
Freight and Express	974.34	
Telephone and Telegraph	68.72	
Traveling Expense	274.85	
Interest Paid	409.80	
Discount on Notes Payable	1,408.00	
Profit and Loss	20,694.80	
Dividends	3,375.00	
Capital Stock, Preferred 6% Cumulative		$100,000.00
Capital Stock, Common		263,800.00
Accounts Payable		40,864.56
Notes Payable		187,500.00
Cloth Sales		137,818.07
Waste Sales		922.94
Tenement Rents Received		339.50
Discounts Taken		2,873.59
	$734,118.66	$734,118.66

Inventories and Items, June 30, 1916:

Finished Goods	$104,190.24
Stock in Process	71,242.39
Yarn	135,661.63
Coal	1,000.00
Starch	900.00
Supplies	1,150.00
Interest Accrued on Notes Payable	389.41
Interest Prepaid on Notes Payable	211.11
Wages Accrued	2,051.05
Unexpired Insurance	600.00
Prepaid Taxes	402.26
Prepaid Water Rates	100.00
Bad Debts	100.00
Estimated Discounts to be taken on Accounts Payable	817.29
Estimated Discounts to be allowed on Accounts Receivable	460.86

Depreciation rates per annum are 5% on machinery; 3% on tenements; 2% on mill buildings.

Depreciation for the period of six months ending December 31, 1915, was not put upon the books. No additions have been made to the fixed assets within a year.

Estimated discounts on the accounts receivable and payable were not put upon the books January 1, 1916; these were respectively $400 and $750.

The last two semiannual dividends on preferred stock are unpaid.

Prepare proper statements for a report to the directors as of June 30, 1916.

(*Massachusetts C. P. A. Examination.*)

Solution to Problem 73

TEXTILE MILL

ADJUSTING ENTRIES

June 30, 1916

Depreciation on Machinery		$2,978.47	
Depreciation on Tenements		25.06	
Depreciation on Mill Buildings		750.00	
Reserve for Depreciation on Machinery			$2,978.47
Reserve for Depreciation on Tenements			25.06
Reserve for Depreciation on Mill Buildings			750.00
One-half year's depreciation:			
Machinery, 2½% of	$119,138.73		
Tenements, 1½% of	1,670.66		
Mill Buildings, 1% of	75,000.00		
Profit and Loss		3,753.53	
Reserve for Depreciation on Machinery			2,978.47
Reserve for Depreciation on Tenements			25.06
Reserve for Depreciation on Mill Buildings			750.00
Depreciation for half-year ending January 1, 1916, not set up.			

Discounts Taken	750.00	
Discounts Allowed		400.00
Profit and Loss		350.00
Estimated discounts on accounts payable ($750) and accounts receivable ($400) not entered on books January 1, 1916.		
Dividends	6,000.00	
Preferred Dividends Payable		6,000.00
Cumulative dividends on preferred stock unpaid for the year ended June 30, 1916.		
Interest Paid	389.41	
Interest Accrued on Notes Payable		389.41
Interest accrued on notes payable to date.		
Interest Prepaid on Notes Payable	211.11	
Discount on Notes Payable		211.11
Interest prepaid on notes payable discounted.		
Labor	2,051.05	
Wages Accrued		2,051.05
Accrued wages to date.		
Unexpired Insurance	600.00	
Insurance		600.00
Insurance unexpired as of this date.		
Prepaid Taxes	402.26	
Taxes		402.26
Taxes prepaid as of this date.		
Prepaid Water Rates	100.00	
Water		100.00
Water rates prepaid as of this date.		
Bad Debts	100.00	
Reserve for Bad Debts		100.00
Estimated debts uncollectible.		
Estimated Discounts to be taken on Accounts Payable	817.29	
Discounts Taken		817.29

Discounts Allowed	460.86	
Estimated Discounts to be allowed on Accounts Receivable		460.86
Estimated discounts to be allowed and taken.		

TEXTILE MILL

STATEMENT SHOWING COST OF GOODS MANUFACTURED

For the Six Months Ended June 30, 1916

Stock in Process, January 1, 1916			$ 57,042.38
Raw Materials Used:			
Yarn	$259,882.12		
Add—Freight and Express	974.34	$260,856.46	
Deduct—Inventory, June 30, 1916		135,661.63	125,194.83
Direct Labor			28,030.32
			$210,267.53
Deduct—Stock in Process, June 30, 1916			71,242.39
Prime Cost			$139,025.14
Manufacturing Expenses:			
Finishing		$ 15,381.54	
Oils		50.84	
Coal	$ 1,443.20		
Less—Inventory	1,000.00	443.20	
Starch	$ 1,390.00		
Less—Inventory	900.00	490.00	
Water	$ 122.65		
Less—Rates Prepaid	100.00	22.65	
Supplies	$ 2,974.31		
Less—Inventory	1,150.00	1,824.31	
Repairs		956.63	
Insurance	$ 679.92		
Less—Unexpired	600.00	79.92	

Taxes	$ 1,502.81		
Less—Prepaid	402.26	1,100.55	
Depreciation:			
On Machinery	$ 2,978.47		
On Tenements	25.06		
On Mill Buildings	750.00	3,753.53	24,103.17
Gross Manufacturing Cost			$163,128.31
Deduct:			
Sales of Waste		$ 922.94	
Tenement Rents Received		339.50	1,262.44
Net Cost of Goods Manufactured			$161,865.87

TEXTILE MILL

PROFIT AND LOSS STATEMENT

For the Six Months Ended June 30, 1916

Cloth Sales			$137,818.07
Deduct—Cost of Goods Sold:			
Inventory—Finished Goods, January 1, 1916	$ 66,984.43		
Add—Cost of Goods Manufactured	161,865.87	$228,850.30	
Deduct—Inventory, June 30, 1916		104,190.24	124,660.06
Gross Profit on Sales			$ 13,158.01
Deduct Expenses:			
Traveling Expenses		$ 274.85	
Commissions		4,580.67	
Telephone and Telegraph		68.72	
Brokerage		660.50	
General Expense		389.39	5,974.13
Profit from Operating			$ 7,183.88
Add—Other Income:			
Discounts Taken			2,940.88
Total Income			$ 10,124.76

Deduct Other Charges:			
Loss on Bad Debts		$ 100.00	
Discounts Allowed		1,307.70	
Interest Paid		799.21	
Discount on Notes Payable		1,196.89	3,403.80
Net Profit			$ 6,720.96

TEXTILE MILL

BALANCE SHEET

June 30, 1916

Assets

Fixed Assets:			
Land		$ 10,000.00	
Buildings	$ 75,000.00		
Less—Reserve for Depreciation	1,500.00	73,500.00	
Machinery	$119,138.73		
Less—Reserve for Depreciation	5,956.94	113,181.79	
Tenements	$ 1,670.66		
Less—Reserve for Depreciation	50.12	1,620.54	
Total Fixed Assets			$198,302.33
Current Assets:			
Cash in Bank	$ 12,769.19		
Petty Cash	106.39	$ 12,875.58	
Accounts Receivable	$ 46,085.68		
Less—Reserve for Loss on Bad Debts	100.00	45,985.68	
Mortgage Receivable		875.00	
Estimated Discounts to be taken		817.29	
Total Current Assets			60,553.55
Inventories:			
Finished Goods		$104,190.24	
Stock in Process		71,242.39	
Yarn		135,661.63	

Coal		1,000.00	
Starch		900.00	
Supplies		1,150.00	
Total Inventories			314,144.26
Prepaid Items:			
Interest Prepaid on Notes Payable		$ 211.11	
Unexpired Insurance		600.00	
Prepaid Taxes		402.26	
Prepaid Water Rates		100.00	
Total Prepaid Items			1,313.37
Total Assets			$574,313.51

Liabilities and Capital

Current Liabilities:			
Accounts Payable		$ 40,864.56	
Notes Payable		187,500.00	
Interest Accrued on Notes Payable		389.41	
Wages Accrued		2,051.05	
Estimated Discounts to be Allowed		460.86	
Preferred Dividends Payable		6,000.00	
Total Liabilities			$237,265.88
Capital:			
Capital Stock, Preferred	$100,000.00		
Capital Stock, Common	263,800.00	$363,800.00	
Profit and Loss:			
Debit balance	$ 20,694.80		
Adjustments for preceding period	3,403.53		
Dividends	9,375.00		
	$ 33,473.33		
Deduct—Profits for the period	6,720.96		
Deduct—Debit balance, June 30, 1916		26,752.37	
Total Capital			337,047.63
Total Liabilities and Capital			$574,313.51

Points Illustrated in Problem 73

(a) Operation of Tenements. In this solution the operation of the tenement property is incorporated in the manufacturing statement on the theory that the housing of workmen is a manufacturing expense. The decision of this question in each case should turn on the facts involved. If the housing of workmen is primarily necessary to reduce the turnover of labor or to improve working conditions, then the operation of the housing property is a manufacturing element. If, however, the tenement investment was made as a collateral matter to produce additional income, the operation of the tenements would not affect the manufacturing statement.

(b) Waste Sales. Waste sales in this problem are taken to be sales of waste which is used in caring for machinery, or sales of scrap resulting from the operation of the machinery on work in process. In either of these events any value realized from the sale or other utilization of such waste product is a reduction of the manufacturing expense. If waste were manufactured as a by-product and then sold, the sales of such waste would be sales of the business and should not be shown as a reduction of manufacturing expense. In Volume IV, Chapter XXIII, the items generally entering into the cost of goods sold are shown.

(c) Unpaid Preferred Dividends. Where cumulative dividends on preferred stock have not been declared, they should not be shown in the accounts, although a memorandum of them should be made on the balance sheet as explained in Volume IV, Chapter VI, § 8. Some accountants recommend that the surplus of the corporation be so stated as to show what portion of it must first be used to pay dividends on preferred stock prior to those on common stock. In this case, however, the unpaid preferred dividends had evidently been declared. Once declared they constitute liabilities and so should be shown on the accounts.

(d) Cash Discounts on Outstanding Accounts. While cash disccunts should be recorded only when taken, nevertheless it is sometimes advisable to estimate the amount of discount which it is expected will be taken, in order to prepare a balance sheet indicating the approximate amount collectible from customers and payable to creditors. (See Volume I, Chapter XXV, §§ 8 and 16.)

Problem 74

GEORGE W. DUNN

TRIAL BALANCE

December 31, 1920

Cash	$ 5,627.00	
Accounts Receivable	229,296.00	
Notes Receivable	22,600.00	
Inventory, December 31, 1919 (cost)	215,275.00	
Accrued Interest on Notes Receivable	654.00	
Real Estate (book value)	161,540.00	
Store Fixtures (book value)	19,416.00	
Office Furniture and Fixtures (book value)	2,760.00	
Prepaid Interest on Discounted Notes	1,350.00	
Catalogues and Advertising Matter on Hand	956.00	
Prepaid Taxes	897.00	
Prepaid Insurance	175.00	
Accounts Payable		$ 89,264.00
Notes Payable		50,000.00
Mortgage Payable		70,000.00
Accrued Interest on Notes Payable		560.00
Accrued Interest on Mortgage Payable		700.00
George W. Dunn, Capital		370,000.00
George W. Dunn, Drawings	15,677.00	
Sales		802,071.00
Sales Returns and Allowances	17,200.00	
Purchases	599,025.00	
Purchase Returns and Allowances		8,672.00
Freight and Hauling Inward	4,130.00	

Advertising	19,607.00	
Store Clerks' Salaries	20,460.00	
Traveling Salesmen's Salaries	18,643.00	
Traveling Expenses	13,721.00	
Store Supplies Used	1,416.00	
Freight and Hauling Outward	2,160.00	
Office Clerks' Salaries	7,482.00	
Office Expenses	1,786.00	
Maintenance of Real Estate	14,682.00	
Income from Rental of Upper Floors		11,627.00
Interest on Notes Receivable		1,287.00
Interest on Bank Balances		96.00
Cash Discounts on Purchases		4,893.00
Interest on Notes Payable	5,740.00	
Interest on Mortgage Payable	4,200.00	
Cash Discounts on Sales	2,695.00	
	$1,409,170.00	$1,409,170.00

Inventory, December 31, 1920 (cost), $176,482.

Required:

(a) Profit and loss statement
(b) Balance sheet
(c) Closing entries

Mr. Dunn conducts a wholesale jobbing business. He owns a six-story building, using the basement and first two floors for his business and renting the upper floors.

"Maintenance of Real Estate" includes taxes, insurance, repairs to building, depreciation, heat and light, janitor and helpers, etc.

Freight and hauling inward on merchandise purchases is considered a part of the cost of goods purchased, and the proper portion thereof is included in the cost of goods on hand, both at the beginning and at the end of the year.

This trial balance was taken after all necessary adjusting entries had been made and posted.

Solution to Problem 74

(a)

GEORGE W. DUNN

PROFIT AND LOSS STATEMENT

One Year Ending December 31, 1920

Gross Sales			$802,071.00	
Less—Returns and Allowances			17,200.00	
Net Sales				$784,871.00
Deduct—Cost of Goods Sold:				
Inventory, December 31, 1919		$215,275.00		
Gross Purchases	$599,025.00			
Less—Returns and Allowances	8,672.00			
Net Purchases		590,353.00		
Freight and Hauling Inward		4,130.00	$809,758.00	
Less—Inventory, December 31, 1920			176,482.00	633,276.00
Gross Profit on Sales				$151,595.00
Deduct—Operating Expenses:				
Selling Expenses:				
Advertising		$ 19,607.00		
Store Clerks' Salaries		20,460.00		
Traveling Salesmen's Salaries		18,643.00		
Traveling Expenses		13,721.00		
Store Supplies Used		1,416.00		
Freight and Hauling Outward		2,160.00	$ 76,007.00	
Administrative Expenses:				
Office Clerks' Salaries		$ 7,482.00		
Office Expenses		1,786.00		
Maintenance of Real Estate	$ 14,682.00			
Less—Income from Rental of Upper Floors	11,627.00	3,055.00	12,323.00	88,330.00
Net Trading Profit				$ 63,265.00

Add—Other Income:		
Interest on Notes Receivable	$ 1,287.00	
Interest on Bank Balances	96.00	
Cash Discounts on Purchases	4,893.00	6,276.00
Total Income		$ 69,541.00
Deduct—Other Charges:		
Interest on Notes Payable	$ 5,740.00	
Interest on Mortgage Payable	4,200.00	
Cash Discounts on Sales	2,695.00	12,635.00
Net Profit for the year		$ 56,906.00

(b)

GEORGE W. DUNN

BALANCE SHEET

December 31, 1920

Assets

Current Assets:		
Cash	$ 5,627.00	
Accounts Receivable	229,296.00	
Notes Receivable	22,600.00	
Merchandise on Hand (cost)	176,482.00	
Accrued Items:		
Interest on Notes Receivable	654.00	
Total Current Assets		$434,659.00
Fixed Assets:		
Real Estate (book value)	$161,540.00	
Store Fixtures (book value)	19,416.00	
Office Furniture and Fixtures (book value)	2,760.00	
Total Fixed Assets		183,716.00
Deferred Charges to Profit and Loss:		
Catalogues and Advertising Matter on Hand	$ 956.00	
Prepaid Interest on Discounted Notes	1,350.00	
Prepaid Taxes	897.00	
Prepaid Insurance	175.00	
Total Deferred Charges		3,378.00
		$621,753.00

Liabilities and Capital

Current Liabilities:			
Accounts Payable		$ 89,264.00	
Notes Payable		50,000.00	
Accrued Items:			
Interest on Notes Payable	$ 560.00		
Interest on Mortgage Payable	700.00	1,260.00	
Total Current Liabilities			$140,524.00
Fixed Liabilities:			
Mortgage Payable			70,000.00
George W. Dunn's Capital:			
Investment, December 31, 1919		$370,000.00	
Add—Net Profit for the year per Profit and Loss Statement	$56,906.00		
Less—Drawings for the year	15,677.00	41,229.00	
Total Capital			411,229.00
			$621,753.00

(c)

GEORGE W. DUNN

CLOSING ENTRIES

December 31, 1920

Sales	$ 17,200.00	
Sales Returns and Allowances		$ 17,200.00
To close the sales returns and allowances for the year into the Sales account.		
Purchase Returns and Allowances	8,672.00	
Purchases		8,672.00
To close the purchase returns and allowances for the year into the Purchases account.		
Purchases	4.130, 00	
Freight and Hauling Inward		4,130.00
To close the cost of freight and hauling inward on merchandise purchases for the year into the Purchases account.		

Purchases	215,275.00	
Inventory		215,275.00
Cost of goods on hand December 31, 1919.		

Inventory	176,482.00	
Purchases		176,482.00
Cost of goods on hand December 31, 1920.		

Sales	633,276.00	
Purchases		633,276.00
To close the cost of goods sold during the year into the Sales account:		

Inventory, December 31, 1919		$215,275.00
Gross Purchases	$599,025.00	
Less—Returns and Allowances	8,672.00	
Net Purchases		590,353.00
Freight and Hauling Inward		4,130.00
		$809,758.00
Less—Inventory, December 31, 1920		176,482.00
		$633,276.00

Sales	151,595.00	
Profit and Loss		151,595.00
To close the gross profit on sales for the year into Profit and Loss account.		

Gross Sales	$802,071.00
Less—Returns and Allowances	17,200.00
Net Sales	$784,871.00
Deduct—Cost of Goods Sold	633,276.00
	$151,595.00

Interest on Notes Receivable	1,287.00	
Interest on Bank Balances	96.00	
Cash Discounts on Purchases	4,893.00	
Profit and Loss		6,276.00
To close the accounts representing items of extraneous income for the year into Profit and Loss account.		

Income from Rental of Upper Floors	11,627.00	
Maintenance of Real Estate		11,627.00
To transfer the income received from rental of the upper floors to the Maintenance of Real Estate account, in order that this account may show by its balance the cost to the business of occupying the basement and first two floors.		

Profit and Loss	88,330.00	
Advertising		19,607.00
Store Clerks' Salaries		20,460.00
Traveling Salesmen's Salaries		18,643.00
Traveling Expenses		13,721.00
Store Supplies Used		1,416.00
Freight and Hauling Outward		2,160.00
Office Clerks' Salaries		7,482.00
Office Expenses		1,786.00
Maintenance of Real Estate		3,055.00
To close the accounts representing the operating expenses for the year into Profit and Loss account.		

Profit and Loss	12,635.00	
Interest on Notes Payable		5,740.00
Interest on Mortgage Payable		4,200.00
Cash Discount on Sales		2,695.00
To close the accounts representing items of extraneous expense for the year into Profit and Loss account.		

Profit and Loss	56,906.00	
George W. Dunn, Drawings		56,906.00
To transfer the net profit for the year to George W. Dunn's drawing account.		

George W. Dunn, Drawings	41,229.00	
George W. Dunn, Capital		41,229.00
To transfer to George W. Dunn's capital account the credit balance of his drawings account, being the net addition for the year to his capital investment.		

Points Illustrated in Problem 74

(a) Mercantile Statements. As explained in Volume IV, Chapter XXIV, the form of statements for mercantile businesses differs from that used by manufacturing concerns. In this problem the former kind is illustrated.

(b) Drawing Account. In this problem the balance of Profit and Loss is closed into the drawing account, in order to show in the accounts the portion of profits not withdrawn by the proprietor. This procedure is discussed in Volume I, Chapter VIII, § 7. Another procedure which is as often found is to close the balance of Profit and Loss and the balance of the drawing account directly into the capital account.

(c) Freight Inward. The addition of freight inward to the cost of merchandise purchased, as illustrated in this problem, is discussed in Volume I, Chapter IX, § 8.

Problem 75

From the following trial balance and other information, prepare a trading and profit and loss statement:

A AND COMPANY

TRIAL BALANCE

December 31, 1920

Cash	$ 90.00	
Notes Receivable	1,250.00	
Accounts Receivable	27,500.00	
Furniture and Fixtures	2,250.00	
Notes Payable		$ 3,600.00
Accounts Payable		10,000.00

Inventory, January 1, 1920:		
Dept. A	12,500.00	
Dept. B	8,000.00	
Dept. C	9,000.00	
Purchases:		
Dept. A	37,000.00	
Dept. B	10,500.00	
Dept. C	13,500.00	
Bank Overdrafts		2,800.00
Sales:		
Dept. A		43,500.00
Dept. B		13,750.00
Dept. C		16,500.00
Wages:		
Dept. A	1,750.00	
Dept. B	750.00	
Dept. C	950.00	
Trade Expense	1,500.00	
Office Salaries	2,250.00	
Rent, Taxes, Insurance	1,300.00	
Bad Debts	430.00	
Discounts Allowed Customers	630.00	
A, Capital		25,000.00
B, Capital		20,000.00
A, Drawings	2,500.00	
B, Drawings	1,500.00	
	$135,150.00	$135,150.00

The inventory of goods on hand on December 31, 1920, is as follows:

Dept. A	$15,000.00
Dept. B	9,000.00
Dept. C	8,000.00

During the year goods were transferred from Department A to Department B at cost price amounting to $1,000; also to Department C at cost price amounting to $750; neither of these transfers being accounted for through entries on the books. Discount on customers' accounts at 2% on outstanding amount is to be taken into consideration in the solution of this problem.

$500 as a reserve is to be set aside for doubtful and bad debts. Depreciation at the rate of 10% is to be written off on furniture and fixtures. There is accrued rent amounting to $100. Each partner secures 4% interest on his capital, after which the profit is to be divided in proportion to the capital as stated in the trial balance.

Solution to Problem 75

A AND COMPANY

TRADING STATEMENT

Year Ended December 31, 1920

	Total	Dept. A	Dept. B	Dept. C
Sales	$73,750.00	$43,500.00	$13,750.00	$16,500.00
Cost of Goods Sold:				
Inventory, January 1, 1920	$29,500.00	$12,500.00	$ 8,000.00	$ 9,000.00
Purchases	61,000.00	37,000.00	10,500.00	13,500.00
Wages	3,450.00	1,750.00	750.00	950.00
Departmental Transfers		1,750.00	1,000.00	750.00
Total	$93,950.00	$49,500.00	$20,250.00	$24,200.00
Inventory, December 31, 1920	32,000.00	15,000.00	9,000.00	8,000.00
Net	$61,950.00	$34,500.00	$11,250.00	$16,200.00
Gross Profit	$11,800.00	$ 9,000.00	$ 2,500.00	$ 300.00

PROFIT AND LOSS STATEMENT

For the Year Ended December 31, 1920

Trade Expenses		$ 1,500.00	Gross Profits:		
Office Salaries		2,250.00	Dept. A	$9,000.00	
Rent, Taxes, Insurance	$1,300.00		" B	2,500.00	
Accrued Rent	100.00	1,400.00	" C	300.00	$11,800.00
Bad Debts		430.00			
Depreciation of Furniture and Fixtures (10%)		225.00			
Discounts Allowed Customers		630.00			
Reserve for Discounts (2%)		550.00			
Reserve for Bad Accounts		500.00			
Profit Distribution:					
A—Interest	$1,000.00				
A—Balance of Profits	1,397.22	2,397.22			
B—Interest	$ 800.00				
B—Balance of Profits	1,117.78	1,917.78			
		$11,800.00			$11,800.00

Points Illustrated in Problem 75

(a) Mercantile Statements. This problem illustrates the form of financial statements generally in use by mercantile or trading businesses. (See Volume IV, Chapter XXIV.)

(b) Form of Statement. This statement is presented in what is known as the account form, in which the expenses are listed on the left side and the income items on the right. The balance of profit or loss, as the case may require, is inserted to make the totals of the two sides equal. This form is not to be recommended for general use. It is somewhat technical and less easily understood than the running form in which the income items are placed first and the expenses deducted from them. On such a form, the net profit or loss appears at the bottom as the result obtained by subtracting the amount of the expenses from the income or vice versa. (See Volume I, Chapter IX, § 6.)

(c) Subsidiary Statements. The use of subsidiary or supporting schedules is fully explained in Volume I, Chapter XIV.

(d) Interest on Capital. This problem illustrates the futility of allowing interest on capital when the profit and loss ratio is the same as the capital ratio. (See Volume I, Chapter XXXI, § 10.) The net profits in this case are \$4,315, of which $^5/_9$ or \$2,397.22 belong to A, and $^4/_9$ or \$1,917.78 to B. Interest to A and B amounts to \$1,000 and \$800 respectively, which reduces the net profits to \$2,515, of which A gets $^5/_9$ or \$1,397.22, and B $^4/_9$ or \$1,117.78. Adding the credits for interest will give A and B the identical amounts that they would have received if no interest had been allowed. This problem illustrates also the advisability of specifying dates in connection with amounts of capital on which interest is to be allowed. For a general discussion of the method of distributing profits and losses on the basis of capital invested, see Volume I, Chapter XXXI, § 8.

Problem 76

John B. Green has a chain of five retail grocery stores. Goods are sold to consumers for cash; and to small dealers on credit. Additional working capital is required. Three of Green's friends agree to furnish funds providing the business is incorporated. Such books as exist have been kept by single entry. The business is duly incorporated for an authorized capital of \$100,000, par value of shares \$100 each. It is agreed that Green shall turn over his business to the company as at July 1, 1914, on appraised values of physical properties; and values of all book accounts (assets and liabilities) as they shall be disclosed; and Green's net worth is to apply on his stock subscription of $25,000. In addition, Green is to be allowed 25% of the net worth for "good-will." Other capital stock subscriptions are, respectively, A $30,000, B $25,000, C $20,000; and each is to pay immediately in cash a proportionate amount on subscriptions which, altogether, shall aggregate 50% more than the value of capital stock issued to Green.

The appraisal company reports as follows:

Real Estate:	
Store No. 1	$4,000.00
Store No. 2	5,000.00

		Reproductive Values	Sound Values
Buildings:			
Store No. 1		$ 3,000.00	$2,000.00
Store No. 2		7,500.00	5,000.00
Furniture and Fixtures:			
Stores		10,000.00	7,500.00
General Office		1,000.00	500.00
Stock Room		1,000.00	500.00
Automobiles (2)		5,000.00	3,500.00
Inventories (Merchandise):			
In Storeroom		14,000.00	
In Storage (Butter and Eggs)		5,000.00	
In Stores		11,000.00	
No. 1	$ 2,300.00		
No. 2	1,950.00		
No. 3	3,135.00		
No. 4	2,365.00		
No. 5	1,250.00		

The book accounts disclosed are as follows:

Cash at Bank	$ 1,500.00
Cash—General Office Petty Cash	100.00

Cash—Stores		500.00
No. 1	$ 140.00	
No. 2	75.00	
No. 3	160.00	
No. 4	60.00	
No. 5	65.00	
Accounts Receivable—Dealers		2,600.00
Trade Creditors' Accounts		22,280.00
Accrued Wages and Salaries		795.00
Accrued Taxes		100.00
Unexpired Insurance		50.00
Mortgage on Real Estate and Buildings—dated July 1, 1913; principal payable in 5 years; interest at 6% per annum, payable semiannually		7,500.00
Notes Payable (Bank):		
Due 3 months from May 1, 1914 (6%)		10,000.00
Due 3 months from June 1, 1914 (6%)		5,000.00

Interest falling due on mortgage loan has not been paid. Interest on the $10,000 note is payable at maturity. The $5,000 note was discounted.

The following additional facts are shown on the books and records of the John B. Green Company at the close of the first month's business:

Merchandise Purchases (of which $750 was returned)		$35,000.00
Stores' Sales, per Cash Register Totals:		
Store No. 1	$6,000.00	
Store No. 2	3,500.00	
Store No. 3	8,000.00	
Store No. 4	5,000.00	
Store No. 5	2,500.00	
Sales to Dealers		5,000.00
Issues from General Stock (at cost):		
Store No. 1	$5,585.00	
Store No. 2	2,850.00	
Store No. 3	6,470.00	
Store No. 4	4,210.00	
Store No. 5	2,475.00	
Cost of Goods Shipped to Dealers		4,545.00

	Clerks' Wages	Rents	Heat, Light, Cleaning, Ice, etc.	Total
Expenses of Stores:				
Store No. 1	$200.00	$ 65.00	$25.00	$290.00
Store No. 2	135.00	25.00	20.00	180.00
Store No. 3	235.00	75.00	35.00	345.00
Store No. 4	200.00	150.00	35.00	385.00
Store No. 5	135.00	100.00	35.00	270.00

Management and Office Salaries		$385.00
Storeroom and Delivery Wages		265.00
Rent of Office and Storeroom		35.00
Stationery and Office Supplies		40.00
Postage		10.00
Advertising		75.00
In-Freight		50.00
Heat, Light, and Janitor (Office)		15.00
Appraisal and Audit Fees		350.00
Law and Organization Expenses		250.00
Auto Up-Keep		90.00
Telephone		40.00
Debts of John B. Green not disclosed at date of turnover:		
On Creditors' Accounts	$675.00	
On Storage Charges (of which $5 is for current month)	20.00	695.00

The stores' merchandise inventories at the end of the month amount to:

Store No. 1	$2,650.00
Store No. 2	1,875.00
Store No. 3	2,920.00
Store No. 4	2,115.00
Store No. 5	940.00

The stores' cash funds are reduced to:

Store No. 1	$ 100.00
Store No. 2	50.00
Store No. 3	100.00
Store No. 4	50.00
Store No. 5	50.00

Differences are found in the stores' cash funds at the close of the first month's business:

Store No. 1	short	$ 3.00
Store No. 2	over	1.00
Store No. 5	over	17.00

The general merchandise stock shows: spoiled goods $60; shortage in inventory at the end of the month $35.

The stores receive credit for spoiled goods:

Store No. 1	$ 15.00
Store No. 2	10.00
Store No. 3	20.00
Store No. 4	15.00
Store No. 5	30.00

The upper floor of store No. 1 building is tenanted, and rentals at $25 monthly, payable in advance, are found to be three months in arrears—of which $50 is paid during July.

Insurance expires September 30, 1914.

All salaries and wages are payable one-half each on the 1st and 15th of the month.

Dealers have paid on their accounts $4,200.

Trade creditors have been paid (of which $340 is discount) $40,000.

Depreciation charges (annual rates):

On buildings, 5%.
On furniture and fixtures, 10%.
On automobiles, 25%.

Part of store No. 2 building is used for the general office and storeroom.

You are asked to submit:

(a) Opening entries on the books of the corporation (journal form with brief explanations), taking over the business of John B. Green and including payments on account of capital stock subscriptions.

(b) General cash account for the month.

(c) Profit and loss account for the month; showing also, in a clear and simple manner, the stores' operations with percentages of gross profit on cost. It is not necessary to prorate any of the general business expenses to the stores.

(d) Comparative balance sheet as at July 1 and July 31, 1914.

(e) A brief statement giving the grounds of your conclusions in explanation of the loss on goods sold in store No. 5.

(Wisconsin C. P. A. Examination.)

Solution to Problem 76

(a)

OPENING JOURNAL ENTRIES

Unissued Capital Stock		$100,000.00	
Capital Stock			$100,000.00
For authorized capital stock issue of the John B. Green Company, per articles of incorporation.			
Capital Stock Subscriptions		100,000.00	
Unissued Capital Stock			100,000.00
For subscriptions, viz.:			
John B. Green	$25,000.00		
A	30,000.00		

B	25,000.00		
C	20,000.00		
Sundry Assets (as below)		62,800.00	
Vendor			62,800.00
For assets acquired from John B. Green:			
Real Estate	$ 9,000.00		
Buildings	7,000.00		
Furniture and Fixtures	8,500.00		
Automobiles (2)	3,500.00		
Merchandise Inventories:			
Storeroom	14,000.00		
In Storage	5,000.00		
Stores	11,000.00		
Cash at Bank	1,500.00		
Cash—Office Fund	100.00		
Cash—Stores	500.00		
Accounts Receivable—Dealers	2,600.00		
Interest Paid in Advance	50.00		
Unexpired Insurance	50.00		
Vendor		46,000.00	
Sundry Liabilities			46,000.00
For sundry liabilities taken over from John B. Green and assumed by the company:			
Trade Creditors	$22,280.00		
Wages	795.00		
Mortgage Payable	7,500.00		
Notes Payable	15,000.00		
Interest on Mortgage	225.00		
Interest on Note	100.00		
Accrued Taxes (estimated)	100.00		
Good-Will		4,200.00	
Vendor			4,200.00
For 25% of vendor's net equity in business turned over, as disclosed at date, being:			
Assets	$62,800.00		
Liabilities	46,000.00		
Net Equity	$16,800.00		
Good-Will equals 25%, or	4,200.00		

Vendor		21,000.00	
Capital Stock Subscriptions—John B. Green Account			21,000.00
To transfer former account balance and apply same to subscription account in accordance with terms of agreement.			
Cash		31,500.00	
Capital Stock Subscriptions			31,500.00
John B. Green Account	$21,000.00		
50% additional	10,500.00		
Required total payment	$31,500.00		

Distributed as follows:

A, 42% of $30,000	$12,600.00
B, 42% of 25,000	10,500.00
C, 42% of 20,000	8,400.00
	$31,500.00

NOTE:

Total subscriptions A, B, and C	$75,000.00
Required total payment	31,500.00

Which is 42% of total subscriptions.

(b)

CASH ACCOUNT

Balance, July 1	$ 1,500.00	Creditors	$39,660.00
Stock Subscriptions	31,500.00	Pay-Roll	1,572.50
Cash Sales	25,000.00	Interest on Mortgage	225.00
Received from Dealers	4,200.00	Postage	10.00
From Stores	150.00	Balance	20,947.50
Over-Cash	15.00		
Rental	50.00		
	$62,415.00		$62,415.00
Balance, August 1	$20,947.50		

(c)

PROFIT AND LOSS ACCOUNT

Stores	Gross Sales, per Cash Registers	Cost of Goods Sold	Gross Profit or Loss	% Gross Profit or Loss	Stores' Expenses	Operating Profit or Loss
No. 1	$ 6,000.00	$ 5,220.00	$ 780.00	15 %	$ 290.00	$ 490.00
No. 2	3,500.00	2,915.00	585.00	20	180.00	405.00
No. 3	8,000.00	6,665.00	1,335.00	20	345.00	990.00
No. 4	5,000.00	4,445.00	555.00	12.5	385.00	170.00
No. 5	2,500.00	2,755.00	(*Loss* *255.00*)	(*Loss 9%*)	270.00	(*Loss 525.00*)
All Stores	$25,000.00	$22,000.00	$3,000.00	13.6%	$1,470.00	$1,530.00
Dealers	5,000.00	4,545.00	455.00	10	....	455.00
Totals	$30,000.00	$26,545.00	$3,455.00	13 %	$1,470.00	$1,985.00

Profit and Loss Account—*Continued*

		Dr.	Cr.
Operating Profit (brought down)			$1,985.00
Discounts on Purchases			340.00
Cash Overage—Stores			15.00
Waste—Stores	$ 90.00		
Waste—General Stock	60.00		
Inventory Shortage—General Stock	35.00	$ 185.00	
Salaries—Management	$385.00		
Salaries—Storeroom	265.00	650.00	
Rent—Office and Storeroom	$ 35.00		
Heat, Light, and Janitor	15.00		
Stationery	40.00		
Postage	10.00		
Advertising	75.00		
In-Freight	50.00		
Law and Organization	250.00*		
Appraisal and Audit	350.00*		
Auto Up-Keep	90.00		
Telephone	40.00	955.00	
Interest Charges—Loans		112.50	
Insurance		16.67	
Depreciation of Furniture and Fixtures	$ 70.83		
Depreciation of Auto	72.91	143.74	
Balance—Net Profit on Operations		277.09	
		$2,340.00	$2,340.00
Net Operating Profit (brought down)			$ 277.09
Rentals from Buildings			150.00
Depreciation of Buildings		$ 29.16	
Taxes (estimated)		16.66	
Balance—Net Profit to Balance Sheet		381.27	
		$ 427.09	$ 427.09

* This may be written off over a period of, say, six months, $100 monthly.

Stores' expenses comprise:

	Total	Salaries	Rents	Sundries
No. 1	$ 290.00	$200.00	$ 65.00	$ 25.00
No. 2	180.00	135.00	25.00	20.00
No. 3	345.00	235.00	75.00	35.00
No. 4	385.00	200.00	150.00	35.00
No. 5	270.00	135.00	100.00	35.00
	$1,470.00	$905.00	$415.00	$150.00

Journal entry:

Stores' Expenses		$1,470.00	
Wages Accrued			$905.00
Rent of Buildings			90.00
Accounts Payable	$150.00		
	325.00		475.00

(d)

Before the balance sheet for July 31 can be set up, the following adjustment entries must be made:

John B. Green	$ 690.00	
Storage (Butter and Eggs)	5.00	
Accounts Payable		$ 695.00
To record undisclosed liabilities.		
Cash	50.00	
John B. Green		50.00
To record receipt of rent in arrears.		
John B. Green	160.00	
Good-Will		160.00
To reduce good-will to 25% of John B. Green's net worth at time of incorporation.		
Merchandise	35,000.00	
Accounts Payable		35,000.00
To record purchase of merchandise.		

Accounts Payable	750.00	
Merchandise		750.00
To record return of merchandise.		

JOHN B. GREEN COMPANY

COMPARATIVE BALANCE SHEET

Assets

July 1, 1914				July 31, 1914
	Real Estate:			
	$ 4,000.00	Store No. 1	$ 4,000.00	
$ 9,000.00	5,000.00	Store No. 2	5,000.00	$ 9,000.00
	Buildings:			
	$ 2,000.00	Store No. 1	$ 2,000.00	
7,000.00	5,000.00	Store No. 2	5,000.00	7,000.00
4,200.00	Good-Will			4,040.00
	Unpaid Capital Stock Subscriptions:			
	$ 4,000.00	John B. Green	$ 4,800.00	
	17,400.00	A	17,400.00	
	14,500.00	B	14,500.00	
47,500.00	11,600.00	C	11,600.00	48,300.00
	Furniture and Fixtures:			
	$ 7,500.00	Stores	$ 7,500.00	
	500.00	General Office	500.00	
8,500.00	500.00	Storeroom	500.00	8,500.00
3,500.00	Automobiles (2)			3,500.00
	Merchandise Stocks:			
	$14,000.00	General Storeroom	$ 22,020.00	
	5,000.00	Storage (Butter and Eggs)	5,005.00	
30,000.00	11,000.00	Stores	10,500.00	37,525.00
2,600.00	Accounts Receivable—Dealers			3,400.00
	Cash at Banks and in Hand:			
	$33,000.00	At Banks	$ 20,947.50	
	100.00	General Office Fund	100.00	
33,600.00	500.00	Stores' Funds	350.00	21,397.50

July 1, 1914				July 31, 1914
		Deferred Charges:		
	$ 50.00	Interest Prepaid—Notes Payable	$ 25.00	
100.00	50.00	Unexpired Insurance	33.33	58.33
		Accounts Receivable—Rents		25.00
$146,000.00				$142,745.83

Liabilities

July 1, 1914				July 31, 1914
$100,000.00		Capital Stock—Authorized Issue ..	$100.000.00	$100,000.00
		Unpaid Subscribed (per contra) ...	48,300.00	
		Issued and Outstanding	$ 51,700.00	
7,500.00		Mortgage Payable (on Real Estate and Building)		7,500.00
		Sundry Creditors:		
	$15,000.00	Notes Payable	$ 15,000.00	
	22,280.00	Creditors' Accounts Payable	18,610.00	
38,075.00	795.00	Wages and Salaries ..	777.50	34,387.50
		Accruals:		
	$ 100.00	Interest on Notes Payable	$ 150.00	
	225.00	Interest on Mortgage .	37.50	
425.00	100.00	Taxes (estimated)	116.66	304.16
		Depreciation Reserves		172.90
		Profit for month of July, 1914		381.27
$146,000.00				$142,745.83

(e)

The loss at store No. 5 may be accounted for:

1. By selling goods on credit instead of for cash.
2. By selling goods at less than cost.
3. By clerks' personal takings; or giving to relatives or friends without charge.
4. By giving "overweight."
5. By carelessness in general.

Adjustments to John B. Green's account:

Charge him with undisclosed liabilities	$690.00	
Credit him with rent due	50.00	$640.00
Charge him with reduction of Good-Will account, 25% of $640		160.00
Net increase		$800.00

The difference found in the store's cash funds at the close of the first month might be held in a suspense or adjustment account until the end of the year.

As between sound and reproductive values, the former should be used. If reproductive values are used, they should be offset by a reserve for depreciation to bring the value of the assets down to sound value.

Points Illustrated in Problem 76

(a) Statement of Mercantile Business. This problem illustrates the form of statements usually required for mercantile or trading businesses. (See Volume IV, Chapter XXIV.)

Problem 77

The Brown Manufacturing Corporation, finding its credit impaired, prepares the following statement as of January 1, 1908:

Assets		*Liabilities*	
Plant	$248,607.00	Capital Stock	$200,000.00
Merchandise	345,156.00	Accounts Payable	488,361.00
Accounts Receivable	174,216.00	Profit and Loss	80,685.00
Cash	1,067.00		
	$769,046.00		$769,046.00

By agreement of all concerned, the corporation applied for receivers, who were appointed and granted permission to operate.

The receivers took no inventory, but revalued certain assets in above statement as follows:

Merchandise	$241,610.00
Accounts Receivable	139,373.00

On October 1, 1909, having paid dividends to creditors and receivers' expenses aggregating $362,845, the receivers reported to the court the following condition: plant $241,747; merchandise $77,564; accounts receivable $63,132; cash $47,637; accounts payable $186,883; and were authorized to turn over the property to the stockholders.

Draw up entries covering the following:

(a) Corporation books, transfer of property to receivers.
(b) Corporation books, recovery of property.
(c) Balance sheet, after above entries are made.
(d) Receivers' books, opening.
(e) Receivers' books, closing.

(*Massachusetts C. P. A. Examination.*)

Solution to Problem 77

(a)

January 1, 1908

Receivers	$630,657.00	
Plant		$248,607.00
Merchandise		241,610.00
Accounts Receivable		139,373.00
Cash		1,067.00
The above entry is made to clear the books of the above assets and to charge the receivers with them at the value at which taken over.		

Accounts Payable	488,361.00	
Receivers		488,361.00
To credit the receivers with the liabilities placed in their hands.		
Profit and Loss	138,389.00	
Merchandise		103,546.00
Accounts Receivable		34,843.00
To charge Profit and Loss with the difference between the book value of the above assets and the value at which they were taken over by the receivers.		

The books would then show the following balances:

Balance Sheet

Assets		*Liabilities*	
Receivers	$142,296.00	Capital Stock	$200,000.00
Deficit	57,704.00		
	$200,000.00		$200,000.00

(b)

October 1, 1909

Plant	$241,747.00	
Merchandise	77,564.00	
Accounts Receivable	63,132.00	
Cash	47,637.00	
Receivers		$430,080.00
To bring on the books the assets turned over to the company by the receivers at the close of the receivership.		
Receivers	186,883.00	
Accounts Payable		186,883.00
To bring on the books the amount due creditors as reported by the receivers.		
Receivers	100,901.00	
Surplus		100,901.00
To close the balance of the Receivers account into Surplus, as this balance represents the net addition to net worth due to the receivership.		

(c)

BALANCE SHEET

October 1, 1909

Assets		*Liabilities*	
Cash	$ 47,637.00	Capital Stock	$200,000.00
Accounts Receivable	63,132.00	Accounts Payable	186,883.00
Merchandise	77,564.00	Surplus	43,197.00
Plant	241,747.00		
	$430,080.00		$430,080.00

(d)

January 1, 1908

Plant	$248,607.00	
Merchandise	241,610.00	
Accounts Receivable	139,373.00	
Cash	1,067.00	
Brown Manufacturing Corporation		$630,657.00
To bring on the receivers' books the assets taken over from the Brown Manufacturing Corporation.		
Brown Manufacturing Corporation	488,361.00	
Accounts Payable		488,361.00
To show the liabilities assumed by the receivers.		

(e)

October 1, 1909

Brown Manufacturing Corporation	$430,080.00	
Plant		$241,747.00
Merchandise		77,564.00
Accounts Receivable		63,132.00
Cash		47,637.00
To show the return to the Brown Manufacturing Corporation of the assets held by the receivers at the close of the receivership.		

Accounts Payable	186,883.00	
Brown Manufacturing Corporation		186,883.00
To account to the Brown Manufacturing Corporation for the liabilities outstanding at the close of the receivership.		

Accounts Payable	301,478.00	
Cash	46,570.00	
Plant		6,860.00
Merchandise		164,046.00
Accounts Receivable		76,241.00
Realization and Liquidation		100,901.00
To close into a Realization and Liquidation account the net change in assets and liabilities which took place during the receivership, this balance representing the net profit due to the receivership.		

Realization and Liquidation	100,901.00	
Brown Manufacturing Corporation		100,901.00
To transfer the net profit to the Brown Manufacturing Corporation, thus closing all accounts on the receivers' books.		

It will be observed that no use is made of the amount representing dividends to creditors and receivership expenses, $362,845. These being interim transactions, no account would be taken of them in closing the books.

Points Illustrated in Problem 77

(a) Statement of Affairs. In a case such as the one in this problem, it is customary to prepare a statement of affairs and a deficiency account as described in Volume I, Chapter XII. None is required by this problem.

(b) Realization and Liquidation Statement. A statement of realization and liquidation is usually prepared at the end of a receivership such as the one covered in this problem. The form of such a statement is outlined in Volume I, Chapter XIII. None is required in this problem.

(c) Profit and Loss Account. In the balance sheet shown in this problem the account entitled "Profit and Loss" is the "Surplus" account. Reference should be made to the discussion of the use of the term "Profit and Loss" when other accounts or statements are meant. (See Volume I, Chapter IX, § 6.)

(d) Surplus Adjustments. The surplus adjustments in this problem are made in accordance with the principles outlined in Volume IV, Chapter VII, § 4.

(e) Interim Transactions. In this case the interim transactions cannot be fully recorded because they are not known. In this respect the solution of the problem resembles the preparation of single-entry statements as described in Volume I, Chapter XXXV.

Problem 78

A corporation with a balance sheet as at December 31, 1912, given below, is placed in charge of a receiver.

Assets		*Liabilities*	
Cash	$ 12,188.00	Accounts Payable	$ 62,060.00
Accounts Receivable	71,227.00	Notes Payable	60,000.00
Investments	13,950.00	Capital Stock	50,000.00
Inventory	83,312.00	Surplus	55,497.00
Fixtures	46,880.00		
	$227,557.00		$227,557.00

An examination of the books discloses the following:

The cash consists of deposit in bank $10,550; currency $595; advanced on traveling expenses $250; sundry expense vouchers $793.

Accounts receivable:

Contracted in 1912	$51,822.00	estimated to shrink $500
" " 1911	5,715.00	" " " 25%
" " 1910	3,180.00	" " " 75%
" prior to 1910	10,510.00	all bad

The investments were considered to be of no value. The inventories were found to contain unsalable stock to the amount of $7,525.

The fixtures were bought as follows:

In 1905	$ 5,115.00
1906	3,002.00
1907	2,150.00
1908	17,810.00
1909	1,005.00
1910	4,505.00
1911	6,115.00
1912	7,178.00
	$46,880.00

Fixtures are estimated to last ten years, and no depreciation has been entered in the accounts. Bills for goods received amounting to $3,512 were not included in the accounts payable of $62,060. The receiver decides to reorganize the business with a capital stock of $150,000, divided as follows: $75,000 common, and $75,000 6% preferred. He offers the creditors 75% of their claims in preferred and 25% in common stock, with a bonus of 25% common. This is accepted by creditors holding $60,000 worth of notes, and $40,000 of claims on open accounts. He offers the stockholders in the old corporation one share of common stock in the new corporation for every two shares in the old corporation. This is accepted by all of them. He estimates that the new corporation can do a business of \$700,000 a year with the goods costing 70%; that his expenses will be \$175,000; that he will allow a quarter of 1% for bad bills, and a depreciation charge of 10% on the cost of fixtures.

Submit an adjusted balance sheet of the new corporation, and an estimated operating account for the first year, showing the estimated percentage earned on common stock, after paying dividends on preferred stock.

(Massachusetts C. P. A. Examination.)

Solution to Problem 78

ADJUSTMENTS IN BALANCE SHEET

Of December 31, 1912

Advances to Salesmen	$ 250.00	
Cash		$ 250.00
To remove from the Cash account an item of cash advanced on account of traveling expenses.		
Surplus	793.00	
Cash		793.00
To remove from the Cash account items of expense vouchers which have been carried as cash.		
Surplus	14,823.75	
Reserve for Bad Debts		4,313.75
Accounts Receivable		10,510.00
To write off estimated shrinkage in accounts receivable.		
Surplus	13,950.00	
Investments		13,950.00
To write off the investments which are considered of no value.		

Surplus	7,525.00	
Inventory		7,525.00
To remove from the Inventory account the unsalable stock of no value.		

Surplus	20,082.70	
Reserve for Depreciation		20,082.70
The above entry is to create a reserve for depreciation of fixtures based upon a life of ten years. Purchases of fixtures and corresponding depreciation are as follows:		

Year Purchased	Cost	Depreciation
1905	$ 5,115.00	$ 4,092.00
1906	3,002.00	2,101.40
1907	2,150.00	1,290.00
1908	17,810.00	8,905.00
1909	1,005.00	402.00
1910	4,505.00	1,351.50
1911	6,115.00	1,223.00
1912	7,178.00	717.80
	$46,880.00	$20,082.70

Surplus	3,512.00	
Accounts Payable		3,512.00
To bring on the books the corresponding liability for goods bought and included in the inventory.		

ADJUSTED BALANCE SHEET

December 31, 1912

Assets		*Liabilities*	
Cash	$ 11,145.00	Accounts Payable	$ 65,572.00
Accounts Receivable	71,227.00	Notes Payable	60,000.00
Advances to Salesmen	250.00	Reserve for Bad Debts	14,823.75
Inventory	75,787.00	Reserve for Depreciation	20,082.70
Fixtures	46,880.00	Capital Stock	50,000.00
Deficit	5,189.45		
	$210,478.45		$210,478.45

ENTRIES TO EFFECT REORGANIZATION

Notes Payable	$60,000.00	
Accounts Payable	40,000.00	
Reorganization Expense	25,000.00	
Capital Stock, Preferred		$75,000.00
Capital Stock, Common		50,000.00
Creditors are offered 75% of their claims in preferred stock and 25% in common stock with a bonus of 25% in common stock. This offer is accepted by the holders of the notes payable and by $40,000 of the book creditors.		
Capital Stock (Old Company)	50,000.00	
Capital Stock, Common		25,000.00
Surplus		25,000.00
Stockholders in the old company are offered one share of common stock in the new company for every two shares which they now hold. This offer is accepted by all stockholders.		

BALANCE SHEET, NEW CORPORATION

Assets		*Liabilities*	
Cash	$ 11,145.00	Accounts Payable	$ 25,572.00
Accounts Receivable	60,717.00	Reserve for Bad Debts	4,313.75
Advances to Salesmen	250.00	Reserve for Depreciation	20,082.70
Inventory	75,787.00	Capital Stock, Preferred	75,000.00
Fixtures (cost)	46,880.00	Capital Stock, Common	75,000.00
Reorganization Expense	25,000.00	Surplus	19,810.55
	$219,779.00		$219,779.00

Comments on Problem 78

By including reorganization expense $25,000 in the balance sheet, it is understood that it is to be written off over a certain number of years, thus becoming a deferred charge to Profit and Loss. It may be immediately charged to Surplus, thus resulting in the balance sheet showing a deficit of $5,189.45.

In the following estimated operating statement, one-fifth of the reorganization expense is charged against operating profit, thus being written off over a period of five years.

ESTIMATED OPERATING STATEMENT

Year Following Reorganization

Sales	$700,000.00	
Less—Cost of Sales	490.000.00	
Gross Operating Profits		$210,000.00
Deduct:		
Operating Expenses	$175,000.00	
Bad Debts	1,750.00	
Depreciation of Fixtures	4,688.00	
Extinguishment of Reorganization Expenses	5,000.00	186,438.00
Estimated Net Profit		$ 23,562.00
Dividend Charges:		
Preferred Stock, 6% of $75,000	$ 4,500.00	
This leaves net profits belonging to common stock of $19,062, showing an earning of 25.42%.		

Points Illustrated in Problem 78

(a) Surplus Adjustments. The surplus adjustments in this problem are required as explained in Volume IV, Chapter VII.

(b) Depreciation and Reserves. The theory of depreciation and the methods of recording it are described in Volume I, Chapter XXIX. In the solution the reserves for depreciation and for bad debts are shown on the liability side of the balance sheet. This is not considered the best practice.

(c) Corporation Deficit. In the adjusted balance sheet in this solution the deficit is shown on the asset side of the balance sheet. Another way of showing it is by a deduction from the capital stock outstanding. (See Volume IV, Chapter XXI, § 7.)

(d) Prophecies. As a rule, the accountant is not expected to make prophecies of what future business may produce or cost, but in this case estimates are required. Where such estimates are necessary, a careful analysis of the factors entering into the preceding year's business must be made and the use of predetermined percentages will be helpful. (See Volume IV, Chapter XXX, § 3.)

Problem 79

Several manufacturers consolidate their interests and organize the Consolidated Manufacturing Company with an authorized capital stock of $1,000,000, divided into 5,000 shares of common stock and 5,000 of preferred stock at $100 each par value.

The manufacturers sell to the company all of their assets subject to floating debts of $115,000, divided into notes payable $65,000 and accounts payable $50,000, for the sum of $1,000,000, payable $1,000 in cash, $499,000 in common stock, and $500,000 in preferred stock. The company agrees to pay the debts of $115,000. The active assets acquired are inventoried by the Consolidated Manufacturing Company as follows: real estate $175,000, machinery $200,000, and merchandise $155,000.

The patents and good-will are inventoried at a sum equal to the difference between the net cost to the company of the assets acquired and the above valuations of the active assets.

The company receives $1,000 cash for 10 shares of common stock, and for the purpose of providing funds for working capital authorizes an issue of bonds amounting to $300,000, of which $200,000 are immediately sold as follows: $100,000 for cash at 80%, and $100,000 for cash at par with a bonus of common stock amounting to $100,000.

For the purpose of providing common stock to be given as a bonus, the manufacturers donate $200,000 of common stock to the treasury of the company.

Prepare the journal and the cash entries for the company, covering all of the above transactions, and prepare a balance sheet of the company.

(*New York C. P. A. Examination.*)

Solution to Problem 79

CONSOLIDATED MANUFACTURING COMPANY

Consolidated Manufacturing Company, a corporation organized under the laws of ...., with an authorized capital stock of $1,000,000, divided into 5,000 shares of common stock and 5,000 shares of preferred stock, of the par value of $100 each.

Cash	$ 1,000.00	
Common Stock		$ 1,000.00
10 shares common stock issued for cash.		
Plant and Sundry Assets	1,115,000.00	
Notes Payable		65,000.00
Accounts Payable		50,000.00
Vendors		1,000,000.00
For purchase in accordance with contract approved by board of directors.		

Vendors	1,000,000.00	
Cash		1,000.00
Common Stock		499,000.00
Preferred Stock		500,000.00
Payment of balance due on purchase contract.		
Good-Will and Patents	585,000.00	
Real Estate	175,000.00	
Machinery	200,000.00	
Merchandise	155,000.00	
Plant and Sundry Assets		1,115,000.00
To record valuation of assets by board of directors.		
Treasury Common Stock	200,000.00	
Stock Donation		200,000.00
Donation of 2,000 shares.		
Cash	180,000.00	
Discount on Bonds	20,000.00	
Stock Bonus	100,000.00	
Treasury Common Stock		100,000.00
Bonds		200,000.00
Sale of bonds with treasury stock bonus.		
Stock Donation	100,000.00	
Stock Bonus		100,000.00
To close latter account.		

(See balance sheet on page 280.)

Points Illustrated in Problem 79

(a) Opening Entry for Corporation. The opening entry for the corporation is described in Volume I, Chapter XXXIII, § 8.

(b) Plant and Sundry Assets Account. The use of such an account is described in Volume I, Chapter XXXIII, § 8. It is also commented upon in Problem 67.

(c) Valuation of Good-Will. The various methods of valuing good-will are described in Volume IV, Chapter XIX, § 4.

CONSOLIDATED MANUFACTURING COMPANY

BALANCE SHEET

Fixed Assets:		
Good-Will and Patents	$585,000	
Real Estate	175,000	
Machinery	200,000	$ 960,000
Current Assets:		
Merchandise	$155,000	
Cash	180,000	335,000
Deferred Charges:		
Discount on Bonds		20,000
		$1,315,000

Fixed Liabilities:			
Preferred Stock		$500,000	
Common Stock	$500,000		
Less—Treasury Common Stock	100,000	400,000	
Bonds		200,000	$1,100,000
Current Liabilities:			
Notes Payable		$ 65,000	
Accounts Payable		50,000	115,000
Surplus from Stock Donation			100,000
			$1,315,000

(d) Treasury Stock Account. The method of recording treasury stock on the books of account is described in Volume I, Chapter XXXIII, § 9, and in Volume IV, Chapter XV, § 4. There is some difference of opinion among accountants on this matter and it is suggested that the reader review the sections to which reference has been made.

(e) Treasury Stock on Balance Sheet. The treasury stock at its par value is deducted from the par value of stock outstanding as shown by the balance sheet in the above solution. This is in accordance with the procedure suggested in Volume IV, Chapter XV, § 8.

(f) Surplus from Stock Donation. The use of such an account and the theory underlying it are discussed in Volume IV, Chapter XV, § 4.

(g) Issue of Bonds at Discount. The discount on the bonds is listed as a deferred charge on the balance sheet in the above solution. This is done in order that this discount may be prorated over the life of the bonds as advocated in Volume IV, Chapter X, § 10.

(h) Consolidation by Purchase. The procedure by which the consolidation was effected in this case is described in Volume IV, Chapter XXVIII, § 2.

Problem 80

The Gordon Manufacturing Company is organized with authorized capital stock of $2,000,000, divided into 20,000 shares of the par value of $100, of which 15,000 shares, or $1,500,000, shall be preferred stock and 5,000 shares, or $500,000, common stock. The corporation purposes to issue $500,000 in consolidated mortgage bonds to be used towards the purchase of sundry properties. The amount of capital with which the corporation begins business is $50,000, being the proceeds of subscriptions for 500 shares preferred stock.

To carry out the purposes of said corporation, the real estate, water power, machinery, good-will, etc., of certain existing corporations have been purchased at an appraised valuation of $2,000,000, viz., Diamond Manufacturing Company $200,000, Eureka Manufacturing Company $300,000, Champion Manufacturing Company $500,000, American Manufacturing Company $600,000, Aetna Manufacturing Company $400,000, and in payment full-paid stock and bonds have been issued at par on a basis of 60% in preferred stock, 20% in common stock, and 20% in bonds.

Materials and supplies are to be paid for in cash when their value is determined.

Formulate the entries necessary to open the books of the new corporation.

Solution to Problem 80

The Gordon Manufacturing Company, a corporation incorporated under the laws of the State of ...., with an authorized capital stock of $2,000,000, divided into 15,000 shares preferred and 5,000 shares common stock, all of the par value of $100 per share.

Subscribers to Preferred Capital Stock	$ 50,000.00	
Preferred Capital Stock Subscriptions		$ 50,000.00
To record subscriptions to 500 shares of preferred stock.		
Cash	50,000.00	
Subscribers to Preferred Capital Stock..		50,000.00
To record payment of subscriptions.		
Preferred Capital Stock Subscriptions	50,000.00	
Preferred Capital Stock		50,000.00
To record issue of preferred capital stock.		

Plant and Sundry Assets	2,000,000.00	
Diamond Manufacturing Company		200,000.00
Eureka Manufacturing Company		300,000.00
Champion Manufacturing Company		500,000.00
American Manufacturing Company		600,000.00
Aetna Manufacturing Company		400,000.00
To record purchase of certain assets, per contract of sale on file.		
Diamond Manufacturing Company	200,000.00	
Eureka Manufacturing Company	300,000.00	
Champion Manufacturing Company	500,000.00	
American Manufacturing Company	600,000.00	
Aetna Manufacturing Company	400,000.00	
Preferred Capital Stock		1,200,000.00
Common Capital Stock		400,000.00
Consolidated Mortgage Bonds		400,000.00
For settlement of purchase price as follows:		

Preferred Stock,	60%	$1,200,000.00
Common Stock,	20%	400,000.00
Bonds,	20%	400,000.00
	100%	$2,000,000.00

Comment on Problem 80

No entry can be made for materials and supplies since no price has yet been determined upon.

The account with Plant and Sundry Assets will remain upon the books until it is determined what values shall be assigned to each property item taken over. At that time an entry will be made debiting each of the asset units taken over and crediting the Plant and Sundry Asset account. The posting of this entry will open the asset accounts upon the books.

Points Illustrated in Problem 80

(a) Method of Consolidation. In Volume IV, Chapter XXVI, the methods of effecting consolidations are described.

(b) Opening Entry for Corporation. The opening entry for the corporation is made in accordance with the procedure outlined in Volume I, Chapter XXXIII.

(c) Plant and Sundry Assets Account. The use of this account is described in Volume I, Chapter XXXIII, § 8.

Problem 81

Smith Company and Jones Company being pressed by their bankers and obliged to pay off their loans, agree to consolidate. Their liabilities, capital, and earnings are as follows:

	Smith Co.	Jones Co.
Common Stock	$200,000.00	$100,000.00
Five Per Cent Bonds	100,000.00	Nil
Six Per Cent Loans	25,000.00	50,000.00
Surplus	30,000.00	Nil
	$355,000.00	$150,000.00
Together		$505,000.00
Earnings available for Interest and Dividends	$ 22,500.00	$ 10,000.00
Together		$ 32,500.00

Smith Company issue $100,000 additional common stock and $100,000 additional bonds and buy up Jones Company which will be liquidated. The total expenses of liquidation and issue of new stock and bonds amount to $10,000, and the cash balance will be increased by $15,000. No increased profits are anticipated from the consolidation but it is considered that the earnings of $32,500 can be maintained. Owing to the condition of Jones Company it is decided that its stockholders should receive $1,000 less income per annum.

(a) How much of the $100,000 of additional capital stock of Smith Company should be issued to the stockholders of Jones Company, and how much is available for stock dividend to Smith Company stockholders?

(b) Show the entries to record all the transactions on the books of Smith Company.

(*Massachusetts C. P. A. Examination.*)

Solution to Problem 81

The following interpretation has been placed upon certain points in this problem:

First. The new issue of bonds of the Smith Company is sold to bankers or to other parties, and the proceeds used in paying off the loan accounts of both companies, consuming $75,000 of the bond issue.

The expenses of liquidation and issue of new stock and bonds amounting to $10,000 were also paid from the proceeds of the issue, leaving a cash balance of $15,000, to which the problem refers.

Second. It is assumed that the entire earnings remaining after payment of interest are to be distributed in the form of dividends.

The interest charges under the old arrangement amount to $6,500 for Smith Company and $3,000 for Jones Company, or a total of $9,500.

As the old loans of both companies will be paid off, there will be a cancellation of the interest charges on the same, leaving a funded debt of $200,000 of 5% bonds, carrying interest charge of $10,000. As it is expected that the earnings of $32,500 will be maintained, this amount, less the $10,000 interest charge, leaves $22,500 of earnings available for dividends, which is equivalent to 7½% on a total capitalization of $300,000.

Under the old arrangement, Jones Company with earnings of $10,000, less an interest charge of $3,000, had left available for dividends $7,000.

The problem states that Jones Company stockholders are to receive under the new arrangement $1,000 less income per annum. This, we assume to mean that there will be $1,000 less distributed to them in the form of annual dividends than in prior years. This would give them $6,000 in dividends instead of $7,000 as under the old plan.

The $300,000 capitalization of the consolidated company will all be in common stock, on which a uniform rate of dividend will be declared. The only way, therefore, by which a smaller share of the income could be distributed to the old stockholders of Jones Company would be to give them such an amount of stock as would carry with it a dividend distribution of $6,000.

As stated above, the earnings available for dividends are equivalent to 7½% on capitalization. If the old Jones Company stockholders are to receive $6,000 in dividends on a 7½% basis, they would have to be the holders of $80,000 worth of stock.

(a)

Therefore, $80,000 of the new stock should be issued to Jones Company stockholders, leaving $20,000 to be distributed to Smith Company stockholders in the form of a stock dividend.

(b)

Sundry Assets	$150,000.00	
Jones Company, Vendors		$150,000.00
To show the total assets acquired from the Jones Company.		
Jones Company, Vendors	50,000.00	
Six Per Cent Loans		50,000.00
To show the liabilities of the Jones Company assumed.		
Jones Company, Vendors	80,000.00	
Common Stock		80,000.00
To show the issue of stock to Jones Company to pay for the net assets of their business.		
Jones Company, Vendors	20,000.00	
Surplus		20,000.00
To close into Surplus the profit accruing to Smith Company.		
Surplus	20,000.00	
Common Stock		20,000.00
To show the distribution of a stock dividend to stockholders of Smith Company to an amount equal to the difference between $100,000 new issue and that issued to Jones Company stockholders.		
Cash	100,000.00	
Five Per Cent Bonds		100,000.00
To show sale of $100,000 bonds for cash.		
Six Per Cent Loans	75,000.00	
Cash		75,000.00
To show the liquidation of 6% loans.		
Expenses	10,000.00	
Cash		10,000.00

Points Illustrated in Problem 81

(a) Methods of Consolidation. In Volume IV, Chapter XXVI, various methods of effecting consolidation of corporations, including the method adopted in this problem, are described.

(b) Surplus Adjustments. The adjustments of surplus in this solution are made in accordance with the principles outlined in Volume IV, Chapter VII, § 4.

Problem 82

The X Corporation is formed with a capital stock of $500,000 (of which $200,000 is preferred and $300,000 is common stock) to acquire and consolidate three existing corporations designated as A, B, and C and having the following status respectively:

	Book Accounts	Liabilities	Surplus	Deficit	Capital
A	$171,000.00	$ 56,000.00	$15,000.00	....	$100,000.00
B	165,000.00	80,000.00	....	$5,000.00	90,000.00
C	108,000.00	47,000.00	6,000.00	....	55,000.00
	$444,000.00	$183,000.00	$21,000.00	$5,000.00	$245,000.00

The several vendor companies which are to be consolidated into one corporation contract with the promoter to sell their assets as above stated and including good-will, at the following prices respectively, viz.: A $125,000, B $100,000, C $75,000, payable one-half in cash and one-half in preferred stock to be issued therefor by the new company, which is also to assume all outstanding obligations.

The promoter or vendor contracts with the newly organized corporation, or vendee company, to acquire the several properties now belonging to A, B, and C companies, respectively, subject to the liabilities as stated, and to provide an additional working capital of $100,000 cash, and to take in payment therefor the entire authorized capital stock of the new company, out of which the subscribing incorporators and directors will acquire their individual stock by purchase from the underwriters.

The common stock is underwritten by bankers at 80% with bonus of one share of preferred to each ten shares of common stock. The bankers are also to take an additional $10,000 of preferred stock at par, as part of their agreement made with the promoter for the financing of the corporation.

(a) Frame the opening entries and balance sheet of the vendee company, showing the costs respectively of assets, good-will, and organization expense on the assumption that the terms of the several contracts are known to all the parties concerned and form the basis of the initial values established before entering into the consolidation.

(b) Frame closing entries of A Company, showing cancellation of stock and distribution of proceeds of sale among stockholders.

(c) Show promoter's compensation or profit for effecting the consolidation.

Solution to Problem 82

(a)

The X Corporation incorporated under the laws of the State of ...., with an authorized capital stock of $500,000, divided into 2,000 shares preferred and 3,000 shares common stock, all of the par value of $100 each.

Cash	$100,000.00	
Plant and Sundry Assets	444,000.00	
Organization Expense	100,000.00	
Good-Will	39,000.00	
Sundry Liabilities		$183,000.00
Capital Stock, Preferred		200,000.00
Capital Stock, Common		300,000.00

The opening entry of this company, explained as follows:

Cash—Working Capital supplied by Promoter		$100,000
Plant and Sundry Assets:		
A Company	$171,000	
B Company	165,000	
C Company	108,000	$444,000
Organization Expenses allowed Promoter:		
Underwriting — 20% of $300,000	$ 60,000	
300 shares Preferred Stock at par	30,000	
100 shares Preferred Stock at par (compensation)	10,000	$100,000
Good-Will—Excess Payments:		
A Company	$ 10,000	
B Company	15,000	
C Company	14,000	$ 39,000
Liabilities:		
A Company	$ 56,000	
B Company	80,000	
C Company	47,000	$183,000

THE X CORPORATION

OPENING BALANCE SHEET

As at . . . .

Cash	$100,000.00	Sundry Liabilities		$183,000.00
Plant and Sundry Assets	444,000.00	Capital Stock:		
Good-Will	39,000.00	Preferred	$200,000	
Organization Expenses	100,000.00	Common	300,000	500,000.00
	$683,000.00			$683,000.00

(b)

A COMPANY

CLOSING ENTRIES

Good-Will	$ 10,000.00	
Surplus		$ 10,000.00
Excess over book value to be paid.		
Sundry Liabilities	56,000.00	
Promoter	125,000.00	
Assets (including Good-Will)		181,000.00
To close book accounts and charge promoter with their value.		
Vendee Company Preferred Stock	62,500.00	
Cash	62,500.00	
Promoter		125,000.00
To record settlement made by promoter in accordance with agreement, one-half payment to be in cash and one-half in preferred stock.		
Surplus	25,000.00	
Capital Stock	100,000.00	
Vendee Company Preferred Stock		62,500.00
Cash		62,500.00
To close all accounts and distribute Vendee Company shares and surplus cash among stockholders.		

(c)

PROMOTER'S TRANSACTIONS

Plant and Sundry Assets (including Good-Will) ...	$483,000.00	
Sundry Assumed Liabilities		$183,000.00
A Company, Vendor		125,000.00
B Company, Vendor		100,000.00
C Company, Vendor		75,000.00
To record net assets bargained for and transferred to the promoter.		
X Corporation, Vendee	300,000.00	
Sundry Assumed Liabilities	183,000.00	
Plant and Sundry Assets (including Good-Will)		483,000.00
To record transfer by promoter to new company of net assets of A, B, and C Companies.		
Capital Stock, Preferred—Vendee Company	200,000.00	
Capital Stock, Common—Vendee Company	300,000.00	
X Corporation, Vendee		400,000.00
Promotion Profit and Loss		100,000.00
To record securing entire capital stock issue of $500,000 from vendee corporation.		
Cash	240,000.00	
Promotion Profit and Loss	90,000.00	
Capital Stock, Preferred—Vendee Company		30,000.00
Capital Stock, Common—Vendee Company		300,000.00
To record sale to bankers of full common stock issue at 80%, difference being cost of underwriting; with additional bonus of one share of preferred stock to each ten shares of common stock.		
Cash	10,000.00	
Capital Stock, Preferred—Vendee Company		10,000.00
To record shares taken by partners at par, per agreement.		
X Corporation, Vendee	100,000.00	
Cash		100,000.00
To record payment to vendee corporation of $100,000 for cash working capital, per agreement. Contract now fulfilled completely.		

A Company, Vendor	125,000.00	
B Company, Vendor	100,000.00	
C Company, Vendor	75,000.00	
Cash		150,000.00
Capital Stock, Preferred—Vendee Company		150,000.00
To record net purchase price paid to individual vendor companies, half in cash and half in preferred stock, in accordance with agreement.		

PROMOTION PROFIT AND LOSS ACCOUNT

Bankers' Charges and Costs for Underwriting Common Stock Issue	$ 90,000.00	Vendee Corporation's Allowance for Preliminary Consolidation Costs	$100,000.00
Balance	10,000.00		
	$100,000.00		$100,000.00
		Balance	$ 10,000.00

Comment on Problem 82

The balance of the Promotion Profit and Loss ($10,000) is represented by 100 shares preferred capital stock of the vendee corporation—par value $100.

Points Illustrated in Problem 82

(a) Method of Consolidation. The method of effecting the solution in this problem is one of those described in Volume IV, Chapter XXVI.

(b) Good-Will. The theory underlying good-will and its valuation is discussed in Volume IV, Chapter XIX.

Problem 83

The balance sheet of the A B C Company is as follows:

Assets

Current:			
Cash	$ 25,000.00		
Accounts Receivable	350,000.00		
Notes Receivable	1,000.00	$ 376,000.00	
Work in Progress, at cost	$ 500,000.00		
Less—Advanced Payments	400,000.00		
	$ 100,000.00		
Merchandise, Materials, and Supplies	250,000.00	350,000.00	
Investments:			
Acme Company Bond	$ 1,000.00		
Stock in Other Companies	200,000.00	201,000.00	$ 927,000.00
Plant:			
Real Estate, Main Plant	$1,000,000.00		
Less—Reserve for Depreciation	50,000.00	$ 950,000.00	
Real Estate, Branch	$ 400,000.00		
Less—Mortgage	50,000.00	350,000.00	
Machinery and Equipment	$1,000,000.00		
Less—Reserve for Depreciation	75,000.00	925,000.00	2,225,000.00
			$3,152,000.00
Good-Will:			
Good-Will Account	$1,000,000.00		
Patent Rights	600,000.00		
Organization Expense	100,000.00	$1,700,000.00	
Deferred Charges:			
Unexpired Insurance	$ 20,000.00		
Prepaid Interest	5,000.00		
Personal Advances	2,000.00	27,000.00	
Accounts Receivable in Suspense		300,000.00	2,027,000.00
Deficit			3,016,000.00
			$8,195,000.00

Liabilities

Current:		
Accounts Payable	$ 300,000.00	
Accrued Wages	10,000.00	
" Taxes	5,000.00	
" Commissions	10,000.00	$ 325,000.00
Notes Payable		800,000.00
		$1,125,000.00
Capital Stock:		
Preferred	$2,000,000.00	
Common	5,000,000.00	7,000,000.00
Reserves:		
For Completion of Contracts		70,000.00
		$8,195,000.00

A reorganization is effected by a new company, the X Y Z Company, taking over the business. The new company starts with the following bonded debt and capitalization:

First Mortgage 6% 20-year Bonds	$1,000,000.00
7% Preferred Stock	2,000,000.00
Common Stock	1,250,000.00
	$4,250,000.00

The stockholders of the old company agree to participate in the reorganization upon the following terms:

Ninety per cent of the preferred stockholders pay $15 per share on their holdings, $100 par value, and surrender their stock, and receive in exchange $15 first mortgage 6% bonds, and equal shares preferred stock of the new company, $100 par value, and also receive $7 per share in lieu of accrued dividends.

Ten per cent of the preferred stockholders do not pay the $15 per share, but surrender their stock in exchange for preferred stock of the new company to an amount equal to 80% of their holdings and $7 per share in lieu of accrued dividends, computed upon 80% of their holdings.

Common stockholders surrender their stock and pay $5 per share on the whole outstanding common stock of the old company, par value $100, and receive in exchange $20 in first mortgage bonds of the new company and 1 share common stock of the new company, par value $100, for each 4 shares so surrendered.

The balance of the bonds were used at par to pay debts of the old company, one-half each on notes payable and accounts payable, and $300,000 of notes payable are paid in cash. Accrued profit on work in progress is estimated at $100,000.

Draft balance sheet of the X Y Z Company after conclusion of reorganization.

(*Massachusetts C. P. A. Examination.*)

Solution to Problem 83*

X Y Z COMPANY

BALANCE SHEET

Assets

Current:		
Cash	$ 107,800.00	
Accounts Receivable	350,000.00	
Notes Receivable	1,000.00	$ 458,800.00
Work in Progress, at cost ..	$ 500,000.00	
Estimated Profit Accrued ..	100,000.00	
	$ 600,000.00	

* Solution by Hazen P. Philbrick, C. P. A.

Less—Advanced Payments on Account	400,000.00		
Estimated Equity in Unfinished Contracts	$ 200,000.00		
Merchandise, Materials, and Supplies	250,000.00	450,000.00	
Investments:			
Acme Company Bonds	$ 1,000.00		
Stock in Other Companies	200,000.00	201,000.00	$1,109,800.00
Plant:			
Real Estate, Main Plant	$1,000,000.00		
Less—Reserve for Depreciation	50,000.00	$ 950,000.00	
Real Estate Branch	$ 400,000.00		
Less—Mortgage	50,000.00	350,000.00	
Machinery and Equipment	$1,000,000.00		
Less—Reserve for Depreciation	75,000.00	925,000.00	2,225,000.00
			$3,334,800.00
Good-Will:			
Good-Will Account	$1,000,000.00		
Patent Rights	600,000.00		
Organization Expense	137,200.00	$1,737,200.00	
Deferred Charges:			
Unexpired Insurance	$ 20,000.00		
Prepaid Interest	5,000.00		
Personal Advances	2,000.00	27,000.00	
Accounts Receivable in Suspense		300,000.00	2,064,200.00
			$5,399,000.00

Liabilities and Net Worth

Current:			
Accounts Payable	$ 60,000.00		
Accrued Wages	10,000.00		
Accrued Taxes	5,000.00		
Accrued Commissions	10,000.00	$ 85,000.00	
Notes Payable		260,000.00	$ 345,000.00

Funded:			
First Mortgage Bonds			1,000,000.00
Total Liabilities			$1,345,000.00
Capital Stock:			
Preferred Authorized	$2,000,000.00		
Less—Unissued	40,000.00	$1,960,000.00	
Common. Authorized and Issued		1,250,000.00	
Total Capital Stock Issued		$3,210,000.00	
Reserve for Completion of Contracts		70,000.00	
Reserve for Working Capital		774,000.00	4,054,000.00
			$5,399,000.00

A new corporation is formed; therefore, the books of the old corporation would be closed, and books opened for the new corporation. The requirement of the problem is to secure a balance sheet of the new corporation. Since this may be secured by making a few adjustments of the old balance sheet, it seems unnecessary to do more than this, even though theoretically the individual steps should be carried out. The passage from the balance sheet of the old company to that of the new one may be carried out by setting up their auxiliary accounts as follows:

REORGANIZATION ADJUSTMENT

Deficit Account (old company)	$3,016,000.00	
Reorganization Expense (old company)	100,000.00	
Reduction in Common Stock		$3,750,000.00
Preferred Stock Surrendered, not reissued, (20% of 10% of $2,000,000)		40,000.00
Estimated Profit Accrued on Work in Progress		100,000.00
Balance considered a Reserve for Working Capital	774,000.00	
	$3,890,000.00	$3,890,000.00

REORGANIZATION CASH

Received from Preferred Stockholders ($15 per share on 18,000 shares)		$ 270,000.00	
Received from Common Stockholders ($5 per share on 50,000 shares)		250,000.00	
Paid on Notes Payable			$ 300,000.00
Reorganization Expense (new company)			137,200.00
$7 per share on 18,000 shares	$126,000.00		
$7 per share on 80% of 2,000 shares	11,200.00		
Balance, added to cash balance of old company			82,800.00
		$ 520,000.00	$ 520,000.00

MORTGAGE BONDS

Sold for cash to Preferred Stockholders	$ 270,000.00
Sold for cash to Common Stockholders	250,000.00
Applied at par on Notes Payable	240,000.00
Applied at par on Accounts Payable	240,000.00
Total Bonds Issued	$1,000,000.00

Comments on Problem 83

Good-Will account is not closed out. Though its value may be problematical, it may as well be taken over with the rest of the assets at book value. On the other hand, it would not be proper for the new company to carry as an asset the expense of organization of a defunct company; hence, the account is charged off.

The estimated profit accrued on contracts in progress is an earning of the old company; profit on new work on such contracts is an earning of the new company.

The cash paid to the preferred stockholders "in lieu of accrued dividends" must not be called dividends; it is a bonus to induce the stockholders to assent to the reorganization—an organization expense.

In actual cases the balance of such a reorganization adjustment has often been called surplus of the new company; but it has not been earned, nor contributed, and is not properly available for dividends. Under these circumstances, it is preferable to set aside this balance as a reserve for working capital, that it may not be confused with actual earnings in the future.

Points Illustrated in Problem 83

(a) Method of Consolidation. In Volume IV, Chapter XXVI, are described various methods of consolidation including the one utilized in this problem.

(b) Good-Will. For a discussion of the theory of good-will, see Volume IV, Chapter XIX, § 2.

(c) Deferred Credits. The deferring of the profit on the contracts in this problem is in accordance with the principles laid down in Volume IV, Chapter IV, § 4.

(d) Reserve for Working Capital. The nature of working capital is described in Volume I, Chapter XI, § 14. The use of reserve accounts is discussed in Volume IV, Chapter VIII.

(e) Profits of Subsidiary Prior to Consolidation. See Volume IV, Chapter XXVIII, § 4, for a discussion of the usual disposition of profits earned by subsidiary companies prior to consolidation.

Problem 84

A is an operating company and B is a holding company. The following statements are taken from the books of the respective companies, viz.:

A COMPANY

Assets

Cash on Hand	$35,000.00
Book Accounts Receivable	25,000.00

Stock Inventory	21,000.00	$ 81,000.00
Prepaid Accounts		7,000.00
Sinking Fund Trustee		15,000.00
Premiums on Sinking Fund Bonds		700.00
B Company Advances		45,000.00
Investments, B Company Stock		25,000.00
Other Investments		5,000.00
Plant, Franchises, etc		1,400,000.00
		$1,578,700.00

Liabilities

Book Accounts Payable	$ 12,000.00	
Wages	8,000.00	
Bills Payable	50,000.00	
Accrued Accounts	12,000.00	$ 82,000.00
Reserve Accounts		65,000.00
Bonds		750,000.00
Capital Stock		500,000.00
Surplus		181,700.00
		$1,578,700.00

B COMPANY

Assets

Cash on Hand	$ 14,000.00	
Accounts Receivable	6,000.00	$ 20,000.00
Investments:		
A Company's Stock	$500,000.00	
Other Investments	500,000.00	1,000,000.00
Plant, Franchises, etc.		1,250,000.00
Deficit		22,000.00
		$2,292,000.00

Liabilities

Book Accounts Payable	$ 7,000.00	
Bills Payable	130,000.00	
Accrued Accounts	10,000.00	$ 147,000.00

Due A Company	45,000.00
Bonds Issued	1,100,000.00
Capital Stock Issued	1,000,000.00
	$2,292,000.00

Prepare a consolidated balance sheet.

(*Pennsylvania C. P. A. Examination.*)

Solution to Problem 84

WORKING SHEET

	A Company	B Company	Eliminations and Additions	Consolidated Balance Sheet
Assets				
Cash	$ 35,000.00	$ 14,000.00		$ 49,000.00
Accounts Receivable	25,000.00	6,000.00		31,000.00
Stock Inventory	21,000.00			21,000.00
Prepaid Accounts	7,000.00			7,000.00
Sinking Fund Trustee	15,000.00			15,000.00
Premium on Sinking Fund Bonds	700.00			700.00
B Company Advances	45,000.00		$ 45,000.00	
Investments, B Company Stock	25,000.00		25,000.00	
Investments, A Company Stock		500,000.00	500,000.00	
Other Investments	5,000.00	500,000.00		505,000.00
Plant, Franchises, etc	1,400,000.00	1,250,000.00		2,650,000.00
				$3,278,700.00
Liabilities				
Accounts Payable	$ 12,000.00	$ 7,000.00		$ 19,000.00
Bills Payable	50,000.00	130,000.00		180,000.00
Wages Accrued	8,000.00			8,000.00
Accrued Accounts	12,000.00	10,000.00		22,000.00
Reserve Accounts	65,000.00			65,000.00
Bonds	750,000.00	1,100,000.00		1,850,000.00
Due A Company		45,000.00	$ 45,000.00	
Capital Stock	500,000.00	1,000,000.00	525,000.00	975,000.00
Surplus	181,700.00			
Deficit		22,000.00		159,700.00
				$3,278,700.00

Comments on Problem 84

The stock of each company held by the other is eliminated from the assets and from the combined capital stock; the assets received by each company in exchange for this stock appearing elsewhere in the balance sheet; and only the capital stock accountability to outside investors being taken into account because the intercompany holdings of stock do not represent such accountability of the consolidation.

The advances made by A Company to B Company are, of course, offset by the amount due A Company which appears among the liabilities of B Company.

A AND B COMPANIES

CONSOLIDATED BALANCE SHEET

Assets

Cash	$ 49,000.00
Accounts Receivable	31,000.00
Stock Inventory	21,000.00
Investments	505,000.00
Plant, Franchises, etc.	2,650,000.00
Sinking Fund Trustee	15,000.00
Premium on Sinking Fund Bonds	700.00
Prepaid Accounts	7,000.00
	$3,278,700.00

Liabilities and Capital

Accounts Payable	$ 19,000.00
Bills Payable	180,000.00
Wages Accrued	8,000.00
Miscellaneous Accruals	22,000.00
Bonds	1,850,000.00
Reserves	65,000.00
Capital Stock	975,000.00
Surplus	159,700.00
	$3,278,700.00

Points Illustrated in Problem 84

(a) Consolidated Balance Sheet. The consolidated balance sheet is prepared as shown in Volume IV, Chapter XXVIII.

(b) Sinking Fund Reserve. In this problem there is a sinking fund without a corresponding reserve. For a discussion of funds and reserves, see Volume IV, Chapters VIII and XI.

(c) Premium on Sinking Fund Bonds. This item illustrates the deferring of debits where they are to be distributed or prorated over a number of fiscal periods. (See Volume IV, Chapter II.)

Problem 85

From the following three trial balances prepare a consolidated balance sheet as at December 31, 1912, in the form you would draw it up for presentation to the stockholders of the parent company (the Safety Razor Company), showing as separate items therein, (a) the total good-will of the combined companies; and (b) the net profits accruing to the new corporation, viz.: to the Safety Razor Company.

SAFETY RAZOR COMPANY

TRIAL BALANCE

At December 31, 1912

Preferred Stock		$1,500,000.00
Common Stock		1,500,000.00
Investments in Subsidiary Companies:		
4,000 shares of Stock of L W Company and 4,000 shares of Stock of Steel Blade Company, both of $100 each at cost	$2,500,000.00	
Accounts Payable		20,000.00
Dividends from Subsidiary Companies		100,000.00
Administration Expenses	25,000.00	
L W Company Current Account	100,000.00	

Steel Blade Company Advances	150,000.00	
Cash	270,000.00	
Organization Expenses	75,000.00	
	$3,120,000.00	$3,120,000.00

L W COMPANY
TRIAL BALANCE
At December 31, 1912

Properties and Plant	$ 325,000.00	
Good-Will	250,000.00	
Investment in Steel Blade Company: 2,000 shares of par value of $100 each, cost $300,000	400,000.00	
Inventories	250,000.00	
Receivables	195,000.00	
Cash	90,000.00	
Capital Stock (4,000 shares)		$ 400,000.00
Accounts Payable		125,000.00
Steel Blade Company		175,000.00
Surplus (includes $100,000 added to Book Value of Investment in Steel Blade Company)		710,000.00
Safety Razor Company		100,000.00
	$1,510,000.00	$1,510,000.00

STEEL BLADE COMPANY
TRIAL BALANCE
At December 31, 1912

Good-Will	$ 50,000.00	
Property and Plant	325,000.00	
Inventories	190,000.00	
Receivables, General	105,000.00	
L W Company	195,000.00	
Cash	10,000.00	
Capital Stock (6,000 shares)		$600,000.00
Accounts Payable		90,000.00
Safety Razor Company		150,000.00
Surplus or Deficit		35,000.00
	$875,000.00	$875,000.00

In the preparation of your consolidated balance sheet be guided by the following assumed facts:

1. That the Safety Razor Company was formed on March 28, 1912, and acquired its stock ownership in the two subsidiary companies, as shown in its trial balance, on April 1, 1912.

2. That at January 1, 1912, the L W Company had a surplus of $605,000 and the Steel Blade Company a deficit of $50,000.

3. That no inventory was taken of either the L W Company or the Steel Blade Company between January 1 and December 31, 1912, the business of the companies being continued without interruption notwithstanding the change in ownership of the capital stock as indicated above.

4. That prior to December 31, 1912, the L W Company declared a dividend of $100,000 payable to the parent company, which was duly taken up on the books of both companies, being passed through the current accounts and charged against the surplus of the L W Company prior to December 31, 1912.

5. That the difference in the current accounts between the Steel Blade Company and L W Company represents, as to $10,000, merchandise in transit, and as to the remaining $10,000, a charge for rental of warehouse for the last six months of 1912, which has been credited to the Rent account on the books of the Steel Blade Company.

6. That it is estimated on reliable authority which may be accepted as final, that from January 1 to March 31, 1912, the net profits of the L W Company amounted

to $30,000, while during the same period the Steel Blade Company lost $15,000.

Attach your consolidating working papers to the consolidated balance sheet you prepare.

(*Illinois C. P. A. Examination.*)

Solution to Problem 85*

KEY TO DIVISION OF TRIAL BALANCE

As Shown on Working Sheet

L W Company—Surplus:		
Surplus at January 1, 1912		$ 605,000.00
Profits for three months from January 1 to March 31, 1912		30,000.00
Surplus from writing up of Steel Blade Company Stock between March 31 and December 31, 1912		100,000.00
Profits for nine months from March 31 to December 31, 1912		75,000.00
		$ 810,000.00
Less—Dividend declared		100,000.00
Credit per Trial Balance		$ 710,000.00
Intercompany Stock Held by L W Company:		
Steel Blade Company Stock at par		$ 200,000.00
Premium—Paid at time of purchase	$100,000.00	
Premium—Written up on books between March 31 and December 31	100,000.00	200,000.00
Per Trial Balance		$ 400,000.00
Steel Blade Company—Surplus:		
Deficit at January 1, 1912		$ 50,000.00
Deficit for three months from January 1 to March 31, 1912		15,000.00
		$ 65,000.00
Profits for nine months from March 31 to December 31, 1912		100,000.00
Credit per Trial Balance		$ 35,000.00
Intercompany Stock Held by Safety Razor Company:		
L W Company Stock at par	$400,000.00	
Steel Blade Company Stock at par	400,000.00	$ 800,000.00
Premium		1,700.000.00
Per Trial Balance		$2,500,000.00

Solution by A. E. Andersen, C. P. A.

SAFETY RAZ

CONSOLIDATED

		L W Company (After Posting Adjustment No. 1)	
		Assets	Liabilities
	Intercompany Balances:		
1	L W Company		
2	Steel Blade Company		$ 175,000.00 (1) 20,000.00
3	Safety Razor Company		100,000.00
	Intercompany Stockholdings, par value:		
4	L W Company		400,000.00
5	Steel Blade Company	$200,000.00	
	Intercompany Holdings, premium over par:		
6	L W Company and Steel Blade Company		
7	Steel Blade Company—Cost	100,000.00	
8	Steel Blade Company—Written up	100,000.00	
9	Good-Will	250,000.00	
	Surplus:		
10	Balance at January 1, 1912		605,000.00
11	Profit January 1 to March 31, 1912		30,000.00
12	Surplus—Writing up Steel Blade Stock		100,000.00
13	Profits April 1 to December 31, 1912	(1) 10,000.00	75,000.00
14	Dividends declared April 1 to December 31, 1912	100,000.00	
15	Dividends received April 1 to December 31, 1912		
16	Inventories	(1) 10,000.00 250,000.00	
17	Cash	90,000.00	
18	Accounts Receivable	195,000.00	
19	Property Equipment	325,000.00	
20	Accounts Payable		125,000.00
21	Organization Expense		
22	Administration Expense		
23	Capital Stock, Preferred		
24	Capital Stock, Common		
		$1,630,000.00	$1,630,000.00

Note: To save space the adjustments Nos. 1 and 2 have been included in the same columns as the

OR COMPANY

WORKING PAPERS

	Steel Blade Company		Safety Razor Company (After Posting Adjustment No. 2)		Consolidated Balance Sheet	
	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
1	$195,000.00		$ 100,000.00			
2			150,000.00			
3		$150,000.00				
4			400,000.00			
5		600,000.00	400,000.00			
6			1,700,000.00			
7						
8						
9	50,000.00				$1,530,000.00	
10	50,000.00					
11	15,000.00					
12						
13		100,000.00	(2) 40,000.00			$ 125,000.00
14						
15				$ 100,000.00		
16	190,000.00				450,000.00	
17	10,000.00		270,000.00		370,000 00	
18	105,000.00				300,000.00	
19	325,000.00				650,000.00	
20		90,000.00		20,000.00		235,000.00
21			75,000.00	(2) 15,000.00	60,000.00	
22			25,000.00	(2) 25,000.00		
23				1,500,000.00		1,500,000.00
24				1,500,000.00		1,500,000.00
	$940,000.00	$940,000.00	$3,160,000.00	$3,160,000.00	$3,360,000.00	$3,360,000.00

trial balance figures, but the items have been kept separate and marked with the number of the adjustment.

ADJUSTMENTS

Profit and Loss, Mar. 31 to Dec. 31, 1912 (Rent)	$ 10,000.00	
Inventory (Merchandise in transit)	10,000.00	
Steel Blade Company		$ 20,000.00
To adjust Steel Blade Co. current account.		
Profit and Loss, March 31 to December 31, 1912	40,000.00	
Organization Expense		15,000.00
Administration Expense		25,000.00
To write off administration and a portion of organization expenses, balance of latter carried forward as deferred charge.		

SAFETY RAZOR COMPANY, L W COMPANY, AND STEEL BLADE COMPANY

CONSOLIDATED BALANCE SHEET

December 31, 1912

Assets and Deferred Charges

Capital Assets:		
Good-Will	$1,530,000.00	
Properties and Plant	650,000.00	$2,180,000.00
Current Assets:		
Inventories	$ 450,000.00	
Receivables	300,000.00	
Cash	370,000.00	1,120,000.00
Deferred Charges to Income:		
Organization Expenses	$ 75,000.00	
Deduct—Amount (1/5) written off	15,000.00	60,000.00
		$3,360,000.00

Liabilities

Capital Stock Issued and Outstanding:		
Preferred Stock	$1,500,000.00	
Common Stock	1,500,000.00	$3,000,000.00
Current Liabilities:		
Accounts Payable		235,000.00
Surplus:		
Net Income from March 28 to December 31, 1912		125,000.00
		$3,360,000.00

Comments on Problem 85

The chief points in the problem are as follows:

1. The accumulated surplus and deficit at March 31, 1912, in the case of the L W and Steel Blade Companies have been applied, as the case may be, in reduction of or in addition to the good-will item in the consolidated balance sheet. This treatment is generally accepted as correct. Many accountants, however, hold that any surplus or deficit appearing on the books of the subsidiaries at the date of purchase of the capital stock by the holding or parent company, should be carried forward as such in the consolidated balance sheet.

2. The surplus of $100,000 arising from the revaluation of the investment of the L W Company in the capital stock of the Steel Blade Company could have been properly carried to a Capital Surplus account in the consolidated balance sheet or shown separately under Surplus. It is more conservative to treat the item as a reduction of the value of good-will.

3. One-fifth of the organization expenses of $75,000 was written off in submitting the solution to this problem. However, one-third might have been charged off or the entire amount might have been carried forward.

4. The entire amount of $25,000 incurred as administration expenses was written off. Scarcely any good reason can be advanced for carrying this item forward.

5. The "merchandise in transit" item of $10,000 was added to the value of the inventories. It is assumed that it had not been included in the inventory of the L W Company, otherwise the debit adjustment would be against that company's Profit and Loss.

Points Illustrated in Problem 85

(a) Consolidated Balance Sheet. The theory of the consolidated balance sheet and the methods of preparing one are described in Volume IV, Chapter XXVIII.
(b) Good-Will. See Volume IV, Chapter XIX, for a discussion of good-will.
(c) Deferred Charge. This problem illustrates the writing off of deferred charges such as organization expenses. (See Volume IV, Chapter II, § 5.)

Problem 86

On January 1, 1913, the A B Company owned 90% of the stock of the X Y Company and 80% of that of the P Q Company, two subsidiary companies which it thus controlled, and in fact, actually directed the policy and general administration, the minority holdings in each case being in the hands of the officers and employees of the subsidiary company or of other interests friendly to the A B Company. On June 30, 1913, the holdings in the X Y Company were reduced to 80% by the sale of 100 shares at $200 per share, to certain employees not theretofore stockholders, while in the case of the P Q Company, owing to the resignation of an officer, his holdings, consisting of 100 shares, were purchased at par, the holdings by the A B Company being thus increased to 90%, so that on December 31, 1913, the proportion of holdings in the two companies was just reversed.

The following are the trial balances of all three companies (after closing) at December 31, 1913:

TRIAL BALANCES

At December 31, 1913

Particulars	A B Company		X Y Company		P Q Company	
Properties			$ 85,000.00		$ 75,000.00	
Good-Will	$100,000.00					
Stockholdings:						
In X Y Company: 800 shares (book value)	*115,000.00					
In P Q Company: 900 shares at cost	82,000.00					
Current Assets	132,000.00		135,000.00		90,000.00	
Capital Stock:						
A B Company, 3,000 shares		$300,000.00				
X Y Company, 1,000 shares				$100,000.00		
P Q Company, 1,000 shares						$100,000.00
Accounts Payable		125,000.00		30,000.00		10,000.00
Surplus at January 1		50,000.00		60,000.00		10,000.00
1913 Profits		†44,000.00		45,000.00		35.000.00
Dividends Paid in December, 1913	30,000.00		40,000.00		25,000.00	
Current Accounts	60,000.00			25,000.00		35,000.00
	$519,000.00	$519,000.00	$260,000.00	$260,000.00	$190,000.00	$190,000.00

*After crediting the proceeds of the 100 shares sold, prior to which the investment had been valued at cost.

†Dividends received from subsidiary companies, less expenses of parent company.

Prepare consolidated balance sheet, showing:

1. The liability to the minority stockholders in respect to their equity.
2. The proportion of surplus and profits appertaining to the stockholders of the A B Company.
3. The good-will of the combined companies.

Assume that the profits earned by the X Y Company and P Q Company, respectively, to June 30, 1913, were exactly 50% of the profits for the complete year.

(Illinois C. P. A. Examination.)

Solution to Problem 86*

A B COMPANY AND SUBSIDIARIES
CONSOLIDATED WORKING SHEET
December 31, 1913

Debits

	A B Company	X Y Company	P Q Company	Adjustments	Intercompany Eliminations	Combined
Properties		$ 85,000.00	$ 75,000.00			$160,000.00
Good-Will	$100,000.00					(g) 100,000.00
Stockholdings in X Y Company:						
800 shares	115,000.00			$2,750.00		
Par					(a) $80,000.00	
Surplus					(a) 48,000.00 (b) *2,250.00*	
Good-Will						(g) *8,000.00*
Stockholdings in P Q Company:						
900 shares	82,000.00					
Par					(b) 90,000.00	
Surplus					(b) 10,750.00	
Good-Will						(g) *18,750.00*
Current Assets	132,000.00	135,000.00	90,000.00			357,000.000
Current Accounts	60,000.00				(c) 60,000.00	
Dividends Paid in December, 1913:						
A B Company	30,000.00					30,000.00
X Y Company		40,000.00			(d) 32,000.00	(m) 8,000.00
P Q Company			25,000.00		(e) 22,500.00	(m) 2,500.00
	$519,000.00	$260,000.00	$190,000.00	$2,750.00	$341,000.00	$630,750.00

*Solution by D. Himmelblau, C. P. A.

Credits

	A B Company	X Y Company	P Q Company	Adjustments	Intercompany Eliminations	Combined
Capital Stock:						
A B Company, 3,000 shares	$300,000.00					$300,000.00
X Y Company, 1,000 shares		$100,000.00			(a) $80,000.00	(m) 20,000.00
P Q Company, 1,000 shares			$100,000.00		(b) 90,000.00	(m) 10,000.00
Accounts Payable	125,000.00	30,000.00	10,000.00			165,000.00
Surplus at January 1:						
A B Company	50,000.00					50,000.00
X Y Company		60,000.00			(a) 48,000.00	(m) 12,000.00
P Q Company			10,000.00		(b) 9,000.00	(m) 1,000.00
1913 Profits:						
A B Company	44,000.00			$2,750.00	(h) *29,750.00* (f) *38,250.00* (d) 32,000.00 (e) 22,500.00	60,250.00
X Y Company		45,000.00			(f) 36,000.00	(m) 9,000.00
P Q Company			35,000.00		(h) 29,750.00 (b) 1,750.00	(m) 3,500.00
Current Accounts		25,000.00	35,000.00		(c) 60,000.00	
	$519,000.00	$260,000.00	$190,000.00	$2,750.00	$341,000.00	$630,750.00

(a) Elimination of holding company's 80% interest in X Y Company at December 31, 1913. The book value being in excess of the cost, such excess is applied in reduction of the intangible asset of good-will.

(b) Elimination of holding company's 90% interest in P Q Company at December 31, 1913, as in (a).

(c) Intercompany current accounts eliminated.

(d), (e) Dividends paid by subsidiaries received by holding company are eliminated.

(f), (h) Holding company's interest in the profits of the subsidiaries.

(g) Good-will of holding company and subsidiaries.

(m) Minority stockholders' interest in capital stock, surplus, earnings, and dividends of subsidiaries.

A B COMPANY AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEET

December 31, 1913

Assets

Capital Assets:		
Properties		$160,000.00
Good-Will		73,250.00
Current Assets		357,000.00
		$590,250.00

Liabilities

Capital Stock of A B Company:		
3,000 shares (par value $100)		$300,000.00
Minority Stockholders' Interest in Subsidiary Companies:		
Capital Stock (par value)	$ 30,000.00	
Surplus	15,000.00	45,000.00
Current Liabilities:		
Accounts Payable		165,000.00
Surplus:		
Balance at January 1, 1913	$ 50,000.00	
Add—Net Profits for year ending December 31, 1913	60,250.00	
	$110,250.00	
Deduct—Dividends Paid	30,000.00	80,250.00
		$590,250.00

Comments on Problem 86

1. It has been assumed that the dividends paid by the A B Company in December, 1913, were declared after June 30, 1913.

2. The cost of the holding company's 900 shares in the P Q Company is made up as follows:

	Shares	Per Share	Amount
Balance at January 1, 1913	800	$ 90.00	$72,000.00
Purchase at June 30, 1913	100	100.00	10,000.00
Balance at December 31, 1913	900		$82,000.00

3. The net profits of the P Q Company pertaining to the holding company (assuming the profits earned to June 30, 1913, were exactly 50% of the profits for the year) are made up as follows:

80% of $17,500 (profits, January 1 to June 30)	$14,000.00
90% of $17,500 (profits, July 1 to December 31)	15,750.00
Total for year	$29,750.00

4. The cost of the holding company's 800 shares in the X Y Company is made up as follows:

	Shares	Per Share	Amount
Balance, December 31, 1913 (per books)	800		$115,000.00
Add back—Sale of 100 shares June 30, 1913	100	$200.00	20,000.00
Cost at January 1, 1913 (per books)	900	$150.00	$135,000.00
Add—Accrued profits on 900 shares from January 1, 1913, to June 30, 1913		22.50	20,250.00
	900	$172.50	$155,250.00
Deduct—100 shares sold at June 30, 1913, at cost (per books)	100	172.50	17,250.00
Adjusted book balance at June 30, 1913	800	$172.50	$138,000.00

Amount received for 100 shares	$ 20,000.00
Cost thereof (per books)	17,250.00
Profit realized on sales	$ 2,750.00

5. The net profits of the X Y Company pertaining to the holding company (assuming the profits earned to June 30, 1913, were exactly 50% of the profits for the year) are made up as follows:

90% of $22,500 (profits, January 1 to June 30)	$20,250.00
80% of $22,500 (profits, July 1 to December 31)	18,000.00
Total for year	$38,250.00

6. The "good-will" of the subsidiary companies in the consolidation was determined in the following manner:

Cost of holdings in X Y Company (800 shares at $150)		$120,000.00
Deduct:		
Par value of 800 shares at date of purchase, January 1, 1913	$80,000.00	
Surplus of X Y Company at date of purchase, January 1, 1913	48,000.00	128,000.00
Intangible value termed Good-Will		*$ 8,000.00*

Cost of original holdings in P Q Company (800 shares at $90)		$ 72,000.00
Deduct:		
Par value of shares at date of purchase, January 1, 1913	$80,000.00	
Surplus of P Q Company at date of purchase, January 1, 1913	8,000.00	88,000.00
Intangible value termed Good-Will		*$ 16,000.00*

Cost of additional holdings in P Q Company (100 shares at $100)		$ 10,000.00
Deduct:		
Par value of shares at date of purchase, June 30, 1913	$10,000.00	
Surplus of P Q Company at date of purchase, June 30, 1913 (see note below)	2,750.00	12,750.00
Intangible value termed Good-Will		*$ 2,750.00*

NOTE: The surplus of the P Q Company at June 30, 1913, is made up as follows:

Surplus at January 1, 1913 ($10,000)	$	1,000.00
Profits from January 1, 1913, to June 30, 1913 ($17,500)		1,750.00
Surplus at June 30, 1913 ($27,500)	$	2,750.00

Points Illustrated in Problem 86

(a) Consolidated Balance Sheet. The consolidated balance sheet in this case is prepared in accordance with Volume IV, Chapter XXVIII.

(b) Dividends as Liabilities. The time when a dividend becomes a liability and the proper method of recording dividends are described in Volume IV, Chapters V and VI.

(c) Good-Will. See Volume IV, Chapter XIX, for a discussion of good-will.

(d) Surplus. The nature of surplus and the methods of adjusting that account are described in Volume IV, Chapter VII.

Problem 87

A "blank" firm is engaged in the lumber business owning timber lands in fee and licensed, saw mills, and other equipment, and 90% of the stock in another lumber corporation. They instruct an accountant to examine their accounts for the purpose of ascertaining the true financial position. The following is a trial balance from the firm's books December 31, 1914, after closing:

	Dr.	Cr.
Cash	$ 20,000.00	
Accounts Receivable	150,000.00	
Logs and Manufactured Lumber	200,000.00	

	Dr.	Cr.
Advances on Account of Season's Logging Operations	100,000.00	
Investments in Controlled Company, 900 shares (cost)	99,000.00	
Timber Lands (cost)	500,000.00	
Mill Plants and Equipment (cost)	250,000.00	
Loans Payable		$ 150,000.00
Accounts Payable		250,000.00
Deposits on Orders		50,000.00
Mortgage on Plants		150,000.00
Controlled Company Current Account	20,000.00	
Partners' Capital		739,000.00
	$1,339,000.00	$1,339,000.00

The controlled company's trial balance December 31, 1914, was:

Cash	$ 5,000.00	
Accounts Receivable	70,000.00	
Logs and Manufactured Lumber	40,000.00	
Timber Lands	50,000.00	
Mills	100,000.00	
Bills Payable		$100,000.00
Blank Firm		30,000.00
Accounts Payable		20,000.00
Capital		100,000.00
Surplus		15,000.00
	$265,000.00	$265,000.00

The following matters disclosed by the accountant's examination were not included in the accounts prior to closing December 31, 1914. The appraised value of the timber lands of the firm, consisting of 200 square miles, is $3,000 per square mile, and those of the controlled company, 20 square miles, at the same price per square mile, and the owners wish these taken up in the accounts. There are unpaid license fees on the timber lands of the firm due in 1920, of $8 per square mile, which must be paid to retain the privilege of cutting the timber under the stumpage agreement. $50,000 of the bills payable of the controlled company were indorsed by the firm, and the latter also discounted customers' notes amounting to $25,000. The difference in the intercompany accounts consisted of a charge by the firm to advances on logging operations instead of to the controlled company. There were prepaid taxes in the controlled company of $2,000. The stock on hand of logs and lumber was pledged as security for loans of $100,000.

Prepare:

(a) Adjusting entries for above.
(b) Corrected trial balances.
(c) Consolidated balance sheet.
(d) Write a brief report covering the examination and balance sheet.

(*Massachusetts C. P. A. Examination.*)

Solution to Problem 87*

(a) Adjusting entries:
On books of the firm:

Timber Lands	$100,000.00	
Partners' Capital		$100,000.00
To bring the book value of the timber lands owned by the firm into agreement with the appraised value of $3,000 per square mile.		
Partners' Capital	1,600.00	
Accrued License Fees		1,600.00

*Solution by Hazen P. Philbrick, C. P. A.

The amount of this entry is based on the assumption that the given figure of $8 per square mile represents the accruals *to date* of a uniformly increasing liability, and that it applies to all the timber land belonging to this firm, amounting to 200 square miles. We are not told how long the agreement has been running, nor the annual rate, nor just when it is to be paid; nor is any explanation given as to why the payment of the license fees of $8 per square mile under the stumpage agreement should be deferred until 1920. Because of these omissions it is impossible to compute the amount of the payment to be made in 1920. On the other hand, if we interpret the question to mean that the amount due in 1920 will be $8 per square mile, we are left entirely without means of computing the accruals *to date*. In an actual case, the accountant would carefully examine the agreement, and all uncertainties would disappear.

Controlled Company, Current Account	$ 10,000.00	
Advances on Logging Operations		$ 10,000.00
Amount charged the latter account in error.		

On the books of the controlled company:

Timber Lands	$ 10,000.00	
Surplus		$ 10,000.00
To bring the book value of the timber lands owned by the company into agreement with the appraised value of $3,000 per square mile.		
Prepaid Taxes	2,000.00	
Surplus		2,000.00
To correct error in not taking account of the prepaid taxes at the closing of the books.		

(b) Adjusted trial balances as of December 31, 1914:

Books of the firm:

Cash	$ 20,000.00	
Accounts Receivable	150,000.00	
Logs and Manufactured Lumber	200,000.00	
Advances on Logging Operations	90,000.00	
Investment in Controlled Company (900 shares), at cost	99,000.00	
Timber Lands, appraised value	600,000.00	
Mill Plants and Equipment, at cost	250,000.00	
Controlled Company, Current Account	30,000.00	
Loans Payable		$ 150,000.00
Accounts Payable		250,000.00
Deposits on Orders		50,000.00
Mortgage on Plants		150,000.00
Partners' Capital		837,400.00
Reserve for License Fees		1,600.00
	$1,439,000.00	$1,439,000.00

Books of the controlled company:

Cash	$ 5,000.00	
Accounts Receivable	70,000.00	
Logs and Manufactured Lumber	40,000.00	
Timber Lands	60,000.00	
Mills	100,000.00	
Prepaid Taxes	2,000.00	
Bills Payable		$100,000.00
Blank Firm		30,000.00
Accounts Payable		20,000.00
Capital Stock (1,000 shares)		100,000.00
Surplus		27,000.00
	$277,000.00	$277,000.00

After these trial balances have been adjusted as shown above, the next step is the preparation of the consolidated balance sheet shown below:

(c) Consolidated balance sheet December 31, 1914:

BLANK FIRM AND CONTROLLED COMPANY

Assets

Cash	$ 25,000.00	
Accounts Receivable	220,000.00	
Logs and Manufactured Lumber	240,000.00	
Advances on Logging Operations	90,000.00	
Timber Lands, at appraised value ($3,000 per square mile)	660,000.00	$1,235,000.00
Mill Plants and Equipment, at cost, disregarding depreciation		350,000.00
Prepaid Taxes		2,000.00
Total Assets		$1,587,000.00

Liabilities and Net Worth

Loans Payable	$250,000.00	
Accounts Payable	270,000.00	
Deposits on Orders	50,000.00	$ 570,000.00
Mortgage on Plants		150,000.00
Accrued License Fees		1,600.00
Total Liabilities		$ 721,600.00
Nine-tenths of Capital and Surplus of Controlled Company, being actual value of partners' investment therein	$114,300.00	
Less—Book Value Partners' Investment therein	99,000.00	
Adjustment to be added to Book Value of Partners' Capital	$ 15,300.00	
Book Value of Partners' Capital	837,400.00	
Net Investment of Partners	$852,700.00	
One-tenth of Capital and Surplus of Controlled Company, being actual value of the investment of minority stockholders therein	12,700.00	
Total Net Worth		865,400.00
		$1,587,000.00

NOTES: Contingent liability under customers' notes discounted, $25,000. Loans payable of $100,000 secured by pledge of the stock of logs and lumber.

(d) Report:

October 15, 1915

Blank Firm,
Dear Sirs:—

At your request, I have made an examination of the accounts of your firm and of the Controlled Company, for the purpose of ascertaining the true financial condition thereof as of December 31, 1914, and I present herewith a consolidated balance sheet showing such financial condition (Exhibit C).

All the liabilities shown in this balance sheet have been verified by me, and I have been unable to discover any further liabilities. The cash and accounts receivable have also been verified by me, and in my opinion sufficient provision has been made for doubtful accounts.

The inventories of logs and lumber were taken and figured by the employees of the respective concerns, and I am informed that these inventories are valued at cost.

The book value of timber lands has been brought into agreement with the value shown by the appraisal of Messrs. Doe and Roe as of said date of December 31, 1914.

The plant and equipment is shown at actual cost, no improper charges having been made to the accounts, and depreciation having been disregarded.

In preparing this balance sheet I have taken into account accrued license fees and prepaid taxes which did not appear on the books.

Certain contingent liabilities and secured claims will be found noted below the balance sheet.

Very truly yours,
(*Signed*) John Brown, C.P.A.

Comments on Problem 87

There are several matters in the course of this solution upon which differences of opinion may arise:

The adjustment to bring book value of timber lands up to the appraised value might have been credited to a special account of some sort, in each set of books, but in the author's opinion nothing is thereby gained. If the lands of the firm are really worth $600,000, the real present net worth of the firm (which is all that partners' capital stands for) is $839,000, and no useful purpose is served by having this figure divided between two accounts. Similarly in the corporation, if the value of the land is understated, the net worth is also understated, which means that surplus is understated, since net worth is merely capital stock plus surplus, and capital stock is fixed. If it be argued that a dividend could not be paid out of a surplus so created, the reply is that a dividend is never *paid* out of surplus, but is *declared* out of surplus, and may be declared out of any surplus that is actual and not fictitious, however it may have been created, such course being legal although sometimes not good policy.

The lack of definiteness in the data regarding the license fee is, of course, to be deplored in an examination question. If this were a fee applying to some particular tract of timber land, which had to be paid before any timber could be cut from that tract, the full amount would be a deduction from the value of the tract. But it appears to be due at a specified date, and to apply to all the land of the firm. Under these circumstances, the most natural assumption is that this is a steadily accruing charge for the period of the agreement; thus, the accrual to date is shown as a deferred liability.

Mention might perhaps be made of the indorsement by the firm of $50,000 of the company's paper. But this amount is already included in the liabilities on the consolidated balance sheet, and to mention it again might be misleading, since the indorsement of course does not double the liability of the consolidation.

The error of $10,000 might be mentioned in the report, but nobody is benefited by advertising a simple technical error.

It is, of course, unusual for land to appear among the current assets. But timber land is the raw material account of these concerns; its value is changing almost daily as the timber is cut and transferred to logs account; and it could be sold, as standing timber, at any time, without interfering with the current operations; it has all the characteristics of a current asset.

The computation of the actual investment of the partners is clearly set forth on the balance sheet itself. It might be simpler to make an entry on the books of the firm to reduce the investment in the company to the *par* value of the stock owned, and then credit the partners, in the consolidated balance sheet, with nine-tenths of the company's surplus. It is true that the result would be the same, in the consolidation; but there is no reason for the entry *on the firm's books.* The only logical entry on those books would be an *increase* in the book investment from cost $99,000, to actual present value $114,300.

Points Illustrated in Problem 87

(a) Consolidated Balance Sheet. See Volume IV, Chapter XXVIII, for a description of consolidated balance sheets and the methods of preparing them.

(b) Secret Reserves. The arguments for and against secret reserves and the ways in which they are usually created are discussed in Volume IV, Chapter VIII, § 5.

(c) Current Assets. See Volume I, Chapter VI, § 10, for a description of the items which are usually classified as current assets.

(d) Notes Receivable Discounted. The procedure which should be followed upon the discounting of notes receivable in order to record the contingent liability thereon, is outlined in Volume I, Chapter XXVII, § 9.

Problem 88

The Peerless Storage Warehouse Company has its treasurer's office in Boston, and warehouse in a nearby town. The treasurer's books at June 30, 1914, show the following:

Warehouse Property	$50,000.00
Cash	98.05
Prepaid Interest	81.99
Accrued Interest on Investments	1,584.00
Investments	48,803.64
Due from Warehouse	643.80
Capital Stock	55,000.00
Mortgage Bonds	42,500.00
Accrued Interest on Bonds	850.00
Reserve for Depreciation	497.24
Surplus	2,364.24

A separate set of books at the warehouse show the following accounts and balances at June 30, 1914:

Cash	$311.05
Accounts Receivable	543.27
Accounts Payable	10.52
Due to Treasurer	843.80

The treasurer had received $200 in payment of accounts receivable at June 30, 1914, which was credited on the treasurer's books to the account with the warehouse but was not taken up on the warehouse books until June 30.

The Y Company is incorporated on March 31, 1914, with $100,000 capital stock, and acquires control of the Peerless Storage Warehouse Company by capital stock ownership. It issues on May 15, 1914, $50,000 par value, first mortgage 5% bonds; purchases 500 shares of the Peerless Storage Warehouse Company stock (par $100) at 101; owns land costing $65,000; purchases $20,000 (par value) first mortgage 4% bonds, due 1920, at 98¼; has cash on hand $24,000, and a credit balance in the Profit and Loss account of $9,150. The taxes assessed on the land as of May 1, 1914, for the following year were $1,200, and there was interest accrued on the bonds issued from May 15, 1914, to June 30, 1914.

(a) Adjust the warehouse company books, bringing the inter-office account with the treasurer in agreement.

(b) Prepare a consolidated balance sheet of the three sets of books at June 30, 1914, and show therein the net amount of capital stock of each company in the hands of the public.

(*Massachusetts C. P. A. Examination.*)

Solution to Problem 88*

(a) Entry on books at warehouse:

Due to Treasurer Account	$200.00	
Accounts Receivable		$200.00
Cash collected by treasurer from ....on June 30.		

(b) The desired consolidated balance sheet appears in the last column of the following working sheet. The surplus of the Y Company is obtained by deducting from the profit and loss balance of $9,150, two months' accrued taxes and one and one-half months' accrued bond interest. In fact, Massachusetts taxes are assessed as of April 1, so that we should have three months' accrued taxes on June 30; and we ought also to take into account accrued taxes on the warehouse property and

*Solution by Hazen P. Philbrick, C. P. A.

accrued interest receivable on the $20,000 of first mortgage 4% bonds owned by the Y Company. However, we are not expected to read into the statement of the problem, errors or additions, unless such a course is absolutely unavoidable.

WORKING SHEET

	Peerless Storage Warehouse Co.		Y Company	Eliminations of Inter-Relations	Total
	Treasurer's Books	Warehouse Books			
Assets					
Cash	$ 98.05	$311.05	$ 24,000.00		$ 24,409.10
Accounts Receivable		343.27			343.27
Investments	48,803.64		19,650.00		68,453.64
Warehouse Property	50,000.00				50,000.00
Land			65,000.00		65,000.00
Prepaid Interest	81.99				81.99
Accrued Interest Receivable	1,584.00				1,584.00
Due from Warehouse	643.80			$ 643.80	
Peerless Storage Warehouse Company Stock, at par			50,000.00	50,000.00	
Premium paid for Peerless Storage Warehouse Company Stock			500.00		500.00
	$101,211.48	$654.32	$159,150.00	$50,643.80	$210,372.00
Liabilities					
Accounts Payable		$ 10.52			$ 10.52
Accrued Bond Interest	$ 850.00		$ 312.50		1,162.50
Accrued Taxes			200.00		200.00
Mortgage Bonds	42,500.00		50,000.00		92,500.00
Capital Stock	55,000.00		100,000.00	$50,000.00	105,000.00
Reserve for Depreciation	497.24				497.24
Surplus	2,364.24		8,637.50		11,001.74
Due to Treasurer		643.80		643.80	
	$101,211.48	$654.32	$159,150.00	$50,643.80	$210,372.00

The $500 premium paid by the Y Company on purchase of the other company's stock might be either deducted from the consolidated surplus or shown by itself among the assets as a good-will item. The latter treatment would appear preferable, however, in a case where not all the stock of the subsidiary company is owned by the holding company.

Points Illustrated in Problem 88

(a) Consolidated Balance Sheet. See Volume IV, Chapter XXVIII, for a discussion of consolidated balance sheets and the methods of preparing them.
(b) Accrued Liabilities. The accrued liabilities in this case are recorded in accordance with the principles outlined in Volume IV, Chapter III, § 1.
(c) Good-Will. See Volume IV, Chapter XIX, for a discussion of good-will.

Problem 89

A cloak manufacturing concern, turning out but one grade of cloaks, claims to have been robbed on the night of April 16 and forthwith files a claim under a burglary insurance policy it was carrying.

The proof of the loss filed by the assured contained two items, viz.: 300 cloaks valued at $12,000 and 1,000 yards of silk stated to be worth $1,500.

The insurance company being notified of the loss, immediately ordered an inventory to be taken, which was done on the morning of the 17th, and disclosed the following:

1,250 cloaks
6,250 yards of cloth
2,500 yards of silk

On the same day you were called in by the insurance company to examine the books for the purpose of proving or disproving the claim, when the following information was obtained:

1. That a complete inventory had been taken on January 1, 1913, of the cloaks, cloth, and silk on hand at that date, the inventory sheets of which had subsequently been lost or destroyed. However, the books showed that the total valuation was $32,675 and the firm's representatives assured you that this was correct and that the inventory had been properly valued at cost prices which had not fluctuated since.
2. That the cloth and silk purchases subsequent to January, 1913, had amounted to 18,750 yards of cloth and 5,000 yards of silk at average prices of 50 cents and $1 per yard of each fabric respectively.
3. That 3,000 cloaks had been manufactured during the same period, which had consumed 20,000 yards of cloth and 5,000 yards of silk, while 4,500 cloaks had been sold.

You were further informed that the manufacturing cost was as follows:

Material	$5.00	per garment
Labor and other expenses	3.50	" "
Total	$8.50	" "

Give the gist of your report to your client; and state what, if any, different case you could have made out for the firm had you been employed by it instead of by the insurance company.

(*Illinois C. P. A. Examination.*)

Solution to Problem 89 *

PROOF OF LOSS

	Cloaks		Silk		Cloth		Total Cost
	Number	Cost	No. of Yards	Cost	No. of Yards	Cost	
Goods reported stolen night of April 16, 1913	300	$ 2,550.00	1,000	$1,000.00	......	....	$ 3,550.00
Inventory taken morning of April 17, 1913	1,250	10,625.00	2,500	2,500.00	6,250	$ 3,125.00	16,250.00
	1,550	$13,175.00	3,500	$3,500.00	6,250	$ 3,125.00	$19,800.00
Add—Goods sold or used in manufacture	4,500	38,250.00	5,000	5,000.00	20,000	10,000.00	53,250.00
	6,050	$51,425.00	8,500	$8,500.00	26,250	$13,125.00	$73,050.00
Deduct—Goods purchased or produced	3,000	25,500.00	5,000	5,000.00	18,750	9,375.00	39,875.00
Balance—Inventory which should have been on hand January 1, 1913	3,050	$25,925.00	3,500	$3,500.00	7,500	$ 3,750.00	$33,175.00
Per ledger	......	....	......	....	......	....	32,675.00
Discrepancy (per Exhibit A)	......	....	......	....	......	....	$ 500.00

* Solution by D. Himmelblau, C. P. A.

CLOAK MANUFACTURING COMPANY

STATEMENT OF BURGLARY LOSS

Night of April 16, 1913

Inventory (per books), January 1, 1913		$32,675.00
Purchases since:		
Cloth, 18,750 yards at $.50	$ 9,375.00	
Silk, 5,000 yards at $1	5,000.00	
Labor and Other Expenses:		
3,000 cloaks at $3.50	10,500.00	24,875.00
		$57,550.00
Deduct—Cost of Goods Sold:		
4,500 cloaks at $8.50		38,250.00
Inventory at April 16, 1913		$19,300.00
Inventory on Hand, April 17, 1913:		
1,250 cloaks at $8.50	$10,625.00	
6,250 yards cloth at $.50	3,125.00	
2,500 yards silk at $1	2,500.00	16,250.00
Difference—representing loss by burglary		$ 3,050.00
Loss as reported by insured:		
300 cloaks at cost ($8.50)	$ 2,550.00	
1,000 yards of silk at cost ($1)	1,000.00	3,550.00
Discrepancy		$ 500.00

The insured is entitled to recover the cost value of the goods stolen, not their estimated market value, unless some other basis of recovery is stipulated in the policy. If cost is used as a basis, the first adjustment to be made is in the value of the goods reported to have been stolen. The excessive claim in this respect is $9,950, which is made up as follows:

Cloaks:

As per proof of loss (300 at $40)	$12,000.00
At cost (300 at $8.50)	2,550.00
Claim not allowable	$ 9,450.00

Silk:

1,000 yards at $1.50	$ 1,500.00
1,000 yards at $1.00	1,000.00
Claim not allowable	$ 500.00

In addition to the foregoing $9,950, there is a discrepancy in the inventories of $500. If the books of account are correct, this discrepancy may be in the inventory on hand January 1, 1913, or in the goods stolen. As the former quantities were not preserved, and as the latter quantities are the subject in dispute, it is impossible to state definitely wherein the discrepancy lies.

If the report is being made on behalf of the manufacturing concern, it would be advisable to ascertain the probable cost of replacing the stocks. If this replacement cost be larger than the original cost of the stolen goods, a claim for the higher values should be filed by the company.

Points Illustrated in Problem 89

(a) Estimate of Inventory. The only point in this problem which requires comment is the estimating of the inventory. For an explanation of the method usually employed in estimating inventories between times of stock-taking, see Volume I, Chapter XVIII, § 8, and Volume IV, Chapter XX, § 7.

Problem 90

The treasurer of the United Manufacturing Company submitted the following figures, taken from the ledger of the company, as representing the condition of the business, December 31, 1915:

Cash		$ 7,500.00	
Accounts Receivable		45,000.00	
Notes Receivable		1,875.00	
Inventory:			
Raw Materials	$20,000.00		
Labor	30,000.00		
Manufactured Goods	16,250.00	66,250.00	
Accounts Payable			$ 5,875.00
Notes Payable			20,000.00
Capital Stock			80,000.00
Surplus, December 31, 1915			14,750.00
		$120,625.00	$120,625.00

A comparison of the above statement with a former one showed a net loss, for the period, of $6,250. The directors had expected a profit, basing their expectations on the result obtained by applying their cost calculations to the volume of sales for the period, and they employed an accountant to investigate the matter. All the nominal accounts had been closed into either the Merchandise account or the Profit and Loss account, and an analysis of these accounts disclosed the following:

Inventory at beginning of period:	
Raw Material	$ 22,500.00
Labor	32,500.00
Manufactured Goods	55,000.00
Purchases during period	50,000.00
Labor	87,500.00

Wages	10,000.00
Traveling Expenses, Commission, etc.	26,250.00
Salaries	19,000.00
Rent	3,750.00
Bad debts	6,375.00
Depreciation	1,500.00
Interest	625.00
Sales	250,000.00
Return Sales	7,500.00

The consumption of material and labor shown by the cost records was:

Material	$45,000.00
Labor	80,000.00

Prepare a statement showing any discrepancy that may exist in the above figures; also a statement of income and profit and loss, and a statement of assets and liabilities December 31, 1915.

(New York C. P. A. Examination.)

Solution to Problem 90

UNITED MANUFACTURING COMPANY

TRIAL BALANCE (BEFORE CLOSING)

December 31, 1915

Cash	$ 7,500.00
Accounts Receivable	45,000.00
Notes Receivable	1,875.00
Inventory, beginning:	
Raw Material	22,500.00
Labor	32,500.00
Manufactured Goods	55,000.00
Purchases during period	50,000.00
Labor	87,500.00
Wages	10,000.00
Traveling Expense, Commission, etc.	26,250.00

Salaries	19,000.00	
Rent	3,750.00	
Bad Debts	6,375.00	
Depreciation	1,500.00	
Interest	625.00	
Sales		$250,000.00
Return Sales	7,500.00	
Accounts Payable		5,875.00
Notes Payable		20,000.00
Capital Stock		80,000.00
Surplus, January 1, 1915		21,000.00
	$376,875.00	$376,875.00

STATEMENT SHOWING DIFFERENCE IN INVENTORY

December 31, 1915

	Total	Raw Material	Labor	Manufactured Goods
Inventory at beginning	$110,000.00	$22,500.00	$ 32,500.00	$55,000.00
Add—Purchases and Labor	137,500.00	50,000.00	87,500.00	....
	$247,500.00	$72,500.00	$120,000.00	$55,000.00
Deduct—Consumption per Cost Records	163,750.00	45,000.00	80,000.00	(38,750.00)
Inventory, December 31, 1915	$ 83,750.00	$27,500.00	$ 40,000.00	$16,250.00
Inventory, per Treasurer's Statement	66,250.00	20,000.00	30,000.00	16,250.00
Difference in Inventory, December 31, 1915	$ 17,500.00	$ 7,500.00	$ 10,000.00	....

Net Loss for period, per Treasurer's Statement	$ 6,250.00
Adjustment, for Increase in Inventory, as shown above	17,500.00
Net Profit for period, per Statement of Income and Profit and Loss	$11,250.00

UNITED MANUFACTURING COMPANY
STATEMENT OF INCOME AND PROFIT AND LOSS
For Period Ended December 31, 1915

Sales		$250,000.00	
Less—Return Sales		7,500.00	
Net Sales			$242,500.00
Cost of Sales:			
Material:			
Inventory, beginning	$ 22,500.00		
Purchases during period	50,000.00		
	$ 72,500.00		
Less—Inventory, end, per statement	27,500.00	$ 45,000.00	
Labor:			
Inventory, beginning	$ 32,500.00		
Labor during period	87,500.00		
	$120,000.00		
Less—Inventory, end, per statement	40,000.00	80,000.00	
Manufactured Goods:			
Inventory, beginning	$ 55,000.00		
Inventory, end	16,250.00		
Add—Decrease in Inventory		38,750.00	
Cost of Sales			163,750.00
Gross Profit on Sales			$ 78,750.00
Expenses:			
Wages		$ 10,000.00	
Traveling Expense, Commissions, etc.		26,250.00	
Salaries		19,000.00	
Rent		3,750.00	
Interest		625.00	
Bad Debts		6,375.00	
Depreciation		1,500.00	67,500.00
Net Profit for period			$ 11,250.00
Surplus, January 1, 1915			21,000.00
Surplus, December 31, 1915			$ 32,250.00

UNITED MANUFACTURING COMPANY

STATEMENT OF ASSETS AND LIABILITIES

December 31, 1915

Assets

Cash		$ 7,500.00
Accounts Receivable		45,000.00
Notes Receivable		1,875.00
Inventory (per Statement):		
Raw Material	$27,500.00	
Labor	40,000.00	
Manufactured Goods	16,250.00	83,750.00
		$138,125.00

Liabilities and Capital

Accounts Payable	$ 5,875.00
Notes Payable	20,000.00
Capital Stock	80,000.00
Surplus, December 31, 1915, (per Statement of Income and Profit and Loss)	32,250.00
	$138,125.00

Points Illustrated in Problem 90

(a) Detection of Errors by Executives. This problem illustrates the preparation of statements for the guidance of executives in their approval of financial statements. A discrepancy evidently exists in the figures submitted and a statement accounting for it is required. See Volume IV, Chapter XXX, for a general discussion of the ways in which an executive can test the correctness of a statement.

(b) Tie-up Between Statements. This case illustrates the relating of the balance sheet and the profit and loss statement in order that they may be tied up or definitely connected. (See Volume IV, Chapter XXI, § 13.)

(c) Testing Inventory. This problem illustrates one method of testing the amount of the inventory. (See Volume I, Chapter XVIII, § 8.)

(d) Profit and Loss Statement. The statement of income and profit and loss in this problem illustrates the form described in Volume I, Chapter IX.

Problem 91

The books and accounts of the Brown Mercantile Company for the year ending December 31, 1920, disclose the following facts which may be assumed to have been verified and to be correct:

Inventory, January 1, 1920	$200,000.00
Net Purchases	700,000.00
Net Sales	800,000.00
Inventory, December 31, 1920	300,000.00
Selling Expenses	50,000.00
General Administrative Expenses	70,000.00
Invested Capital	500,000.00

The following items are to be computed in the solution of this problem:

(a) Rate of gross profit on cost of sales.
(b) Rate of gross profit on sales.
(c) Per cent of sales represented by selling expenses.
(d) Per cent of sales represented by general administrative expenses.
(e) Per cent of sales represented by net profit.
(f) Rate of net profit on invested capital.
(g) Number of times stock has been turned.

Solution to Problem 91

PROFIT AND LOSS STATEMENT

Year Ending December 31, 1920

Sales			$800,000.00
Cost of Goods Sold:			
Inventory, January 1, 1920	$200,000.00		
Net Purchases	700,000.00	$900,000.00	
Inventory, December 31, 1920		300,000.00	600,000.00
Gross Profit on Sales			$200,000.00
Operating Expenses:			
Selling Expenses		$ 50,000.00	
General Administrative Expenses		70,000.00	120,000.00
Net Profit			$ 80,000.00

(a) $200,000 ÷ $600,000 = 33.33%, rate of gross profit on cost of sales.

(b) $200,000 ÷ $800,000 = 25%, rate of gross profit on sales.

(c) $ 50,000 ÷ $800,000 = 6.25%, rate which selling expenses bear to sales.

(d) $ 70,000 ÷ $800,000 = 8.75%, rate which general administrative expenses bear to sales.

(e) $ 80,000 ÷ $800,000 = 10%, rate which net profit bears to sales.

(f) $ 80,000 ÷ $500,000 = 16%, rate of net profit on invested capital.

(g) Cost of goods sold during year, $600,000. Average stock carried during year (found by averaging the inventories at beginning and end of year), $250,000.

$600,000 ÷ $250,000 = 2.4, the number of times the stock was turned during the year.

Points Illustrated in Problem 91

(a) Detection of Errors by Executive. This problem illustrates the preparation of percentages which can be used by executives to test the correctness of figures submitted by the bookkeeping or accounting department. (See Volume IV, Chapter XXX.)

(b) Percentage of Gross Profit. In this problem the gross profit is related to cost of goods sold and to sales. For a discussion of which method is commonly used and for a statement of the reasons for and against each method, see Volume IV, Chapter XXX, § 5.

(c) General Percentages. As mentioned in Volume IV, Chapter XXX, § 9, percentages of various kinds are useful for executive supervision. The ones most frequently calculated are illustrated in this problem.

(d) Turnover. The nature of turnover and the method of calculating it are described in Volume IV, Chapter XXX, § 8.

Problem 92

In taking off a trial balance a bookkeeper finds that his debit footing exceeds the credit by $131.56, and as he is unable to locate the error he carries it to a Suspense account. Later he discovers that a debit item of $679 had been posted to the Machinery account as $697; that an error of $100 had been made in footing the sales column in the sales journal, giving a total of $100 too small posted to the Sales account; that an item of $12 discount allowed to a customer had been posted to the wrong side of the Merchandise Discount account; that $100 withdrawn by the proprietor had been posted to the Wages account; that a credit item of $1.50 had not been posted from the journal.

Make adjusting entries to correct the above errors and state whether the books are now in balance.

Solution to Problem 92

Suspense	$ 18.00	
Machinery		$ 18.00
Suspense	100.00	
Sales		100.00
Merchandise Discount	24.00	
Suspense		24.00
Proprietor	100.00	
Wages		100.00
Suspense	1.50	
Credit Account		1.50

Suspense Account

	$ 18.00	To balance	$131.56
	100.00		24.00
	1.50		
To balance	36.06		
	$155.56		$155.56

There are therefore mistakes not yet discovered amounting to $36.06.

Points Illustrated in Problem 92

(a) Detection of Errors by Bookkeeping Department. This problem illustrates the complexities which result from trial balance differences. For a discussion of the work to be done under such conditions, see Volume IV, Chapter XXXI.

(b) Correction of Errors. A complete and orderly procedure for the correction of errors is described in Volume IV, Chapter XXXIII.

Problem 93

The office of a firm of traders, doing business in San Francisco, was destroyed by an earthquake. The books of account, which had been fully posted and which may be presumed to be correct, were badly damaged. The following ledger accounts were found to be legible: purchases, net, \$69,000; discounts lost \$640; discounts gained \$3,450; sales \$54,000; bills receivable \$33,000.

Inquiry at the bank disclosed a balance on deposit of \$129,000. Bills receivable amounting to \$45,000 had been discounted at the bank. An audit of the checks paid by the bank showed that \$99,000 had been paid to creditors of the firm (including \$60,000 notes payable).

A balance sheet prepared at the last closing of the books was produced, containing the following items: cash \$60,000; accounts receivable \$126,000; loans receivable \$24,000; real estate \$90,000; notes receivable \$78,000; capital \$318,000; notes payable \$60,000.

Prepare a trial balance supplying the missing accounts and giving full particulars for each of them.

Solution to Problem 93

CASH

Balance	\$ 60,000.00	Notes Payable	\$ 60,000.00
Notes Receivable Discounted	45,000.00	Creditors	39,000.00
Customers	123,000.00	Balance	129,000.00
	\$228,000.00		\$228,000.00
Balance	\$129,000.00		

Customers

Balance	$126,000.00	Discounts Lost	$ 640.00
Sales	54,000.00	Cash	123,000.00
		Balance	56,360.00
	$180,000.00		$180,000.00
Balance	$ 56,360.00		

Creditors

Discounts Gained	$ 3,450.00	Purchases	$69,000.00
Cash	39,000.00		
Balance	26,550.00		
	$69,000.00		$69,000.00
		Balance	$26,550.00

Notes Receivable

Balance	$78,000.00	Cash, Notes Receivable Discounted	$45,000.00
		Balance	33,000.00
	$78,000.00		$78,000.00
Balance	$33,000.00		

Notes Payable

Cash	$60,000.00	Balance	$60,000.00

Trial Balance

Real Estate	$ 90,000.00	
Cash	129,000.00	
Notes Receivable	33,000.00	
Loans Receivable	24,000.00	
Accounts Receivable	56,360.00	
Accounts Payable		$ 26,550.00
Capital		318,000.00
Sales		54,000.00
Purchases	69,000.00	

Discounts Gained		3,450.00
Discounts Lost	640.00	
	$402,000.00	$402,000.00

Points Illustrated in Problem 93

(a) Correction of Errors. See Volume IV, Chapter XXXIII, for a discussion of the method by which errors can most satisfactorily be corrected.

(b) Notes Receivable Discounted. The method of recording the contingent liability in such cases is described in Volume I, Chapter XXVII, § 9.

(c) Cash Discounts. See Volume I, Chapter XXV, for a discussion of the nature of cash discounts and the methods of recording them.

Problem 94

From the data contained in the following schedules, make a calculation of the cost of a woolen fabric:

Schedule 1

COST OF YARN USED

The fabric has 50 yards to a piece, or cut as it is called. There are 1,640 threads of yarn running lengthwise in the warp; that is, the fabric has 1,640 ends. The filling, or threads running crossways of the fabric, has 22 threads, or picks, to the inch.

The warp yarn in one piece weighs 66 lbs. and the filling yarn 59 lbs. The size of yarn used is known as 234-run and it is made from a mixture of wool, No. 441.

The cost of this yarn is $.41 per lb. Of a wool mix 100 lbs. will produce only 76.46 lbs. of warp. It is therefore necessary to divide the price of the 100 lbs., or $41, by the yield, 76.46, in order to obtain the price per lb. including the yield. This new price multiplied by the pounds of warp gives the cost of warp yarn used. The cost of filling yarn is arrived at in a similar manner.

During the process of weaving there is yarn waste estimated at 5%. This is an expense which must be added to the cost of warp and filling yarn as above determined in order to arrive at the total cost of yarn.

Schedule 2

LABOR AND EXPENSE

Spooling. The warp yarn must be wound on spools before the warp can be prepared. Spooling is paid for at piece-work rates. The rate is $.2223 per 1,000 yards of 40 ends. The warp has 50 yards of 1,640 ends.

$$\frac{1{,}640 \times 50}{40 \times 1{,}000} \times .2223 = \$.46$$

When the fabric comes off from the loom, it measures 45 yards instead of 50, due to "take up" in weaving. The spooling department expense per woven yard is $.00271.

$$45 \times .00271 = \$.12$$

Dressing. After the warp yarn has been spooled, it has to be wound from the spools onto the loom beam, which process is called dressing. It costs $.27 per piece to do this.

Drawing-In. The warp ends next have to be drawn in through the eyes in the loom harnesses which actuate the warp so that the shuttle carrying the filling can pass over and under the proper threads, thereby weaving the fabric. Drawing-in is paid for at piece-work rates, the rate being \$.605 per 1,000 ends. The expense labor of the drawing-in operation for inspectors, etc., is \$.00141 per woven yard.

Weaving. The principal operation is that of weaving. This is paid for at piece-work rates. The rate for a 22-pick fabric is \$.1021 per woven yard. Day-workers, such as loom fixers, have to be provided for in the cost calculation by adding \$.03375 per woven yard.

Burling. Next the woven fabrics have to be inspected and any knots made by the weavers pulled through. This costs \$.00973 per woven yard.

Sewing. Wrong threads have to be sewed in, the sewing operation costing \$.01301 per woven yard.

In the weaving department, there are power, floor space, fixed charges, and supervision still to be considered. These are estimated to cost 73% of the piece-work weaving department labor.

Wet and Dry Finishing. The last operation is that of finishing the woolen goods. During the process the fabric shrinks, due to the fulling qualities of wool. The average length of a piece, finished, is 38.7 yards. The average cost per yard for finishing process is \$.1680.

The total cost of the piece is \$89.25, and the total cost per yard is \$2.30 based on 38.7 yards to the piece.

Solution to Problem 94

COST SUMMARY OF FINISHED GOODS

Range No. 441 Style No. 1 Ends, 1,640 Picks, 22 Month of April

	Pounds	Mix No.	Run No.	Price	% Yield	Price Inc. Yield	Amount	Total
Warp	66	441	234	$.41	76.46%	$.5362	$35.39	
						(Yarn Waste 5%)	1.77	$37.16
Filling	59	441	234	$.41	76.46%	$.5362	$31.64	
						(Yarn Waste 5%)	1.58	33.22
								$70.38

LABOR AND EXPENSE

(Run No. 234)

	Quantity		Rate	Basis	Amount
Weaving:					
Spooling, Piece-Work Labor	82,000 yds.	at	$.2223	(per 1,000 yds. × 40 ends)	$ .46
Spooling, Expense Labor	45 "	"	.00271	per woven yd	.12
Dressing		" "	.27	per piece	.27
Drawing-In, Piece-Work Labor ...	1,640 ends	"	.605	per 1,000 ends	.99
Drawing-In, Expense Labor	45 yds.	"	.00141	per woven yd	.06
Weaving, Piece-Work Labor	45 "	"	.1021	per yard	4.59
Weaving, Expense Labor	45 "	"	.03375	per yard	1.52
Burling	45 "	"	.00973	per yard	.44
Sewing	45 "	"	.01301	per yard	.57
Total Weaving Department Labor					$ 9.02
Weaving Department Overhead Expense, 73% of Piece-Work Weaving Labor					3.35
Wet and Dry Finishing	38.7 yds.	at	$.1680	per yard	6.50
Total Cost of One Piece					$89.25
Average Cost per Yard (average yards per piece 38.7)					$ 2.30

Points Illustrated in Problem 94

(a) Textile Costs. For a discussion of textile costs, see Volume III, Chapters XXVII, XXVIII, and XXIX. A comprehensive discussion of the method of accounting in a large textile mill is presented.

(b) Cost of a Woven Fabric. In Volume III, Chapter XXVIII, § 1, the elements entering into a cost calculation are clearly shown in the Cloth in Process—Weaving account.

(c) Cost of a Job. See Volume III, Chapters III–V, for a discussion of the method of arriving at the cost of a single job. Often in textile mills where fabrics are woven from yarn, it is the practice to control production by means of orders issued by the superintendent of weaving. In this case the cost of each job is calculated.

Problem 95*

From the data contained in the following schedules, make a distribution of operating expense to the various kinds of silk shipped during the period, and calculate the amount of operating expense per pound of silk produced in a silk-throwing mill.

The superintendent of the mill states that the time required to throw a bale of raw silk into 28/30 Japan single tram, canton tram on cops, organzine, crepe on bobbins, and crepe on cops, is in the proportion of 1, 6, 8, 18, and 20 respectively. These numbers are therefore to be used for weighing the shipments when distributing operating expense.

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*There will be found slight discrepancies in the figures given in this problem, due to the rounding off of decimals.

SCHEDULE 1

POUNDS OF SILK SHIPPED DURING PERIOD

Tram, Canton on Cops	1,114 lbs.	
Tram, 28/30 Japan	546 "	1,660 lbs.
Organzine		1,472 "
Crepe on Bobbins	3,508 "	
Crepe on Cops	6,591 "	10,099 "
		13,231 "

SCHEDULE 2

OPERATING EXPENSE FOR PERIOD

Wages:		
Superintendent	$ 325.00	
Assistant Superintendent	200.62	
Foremen	564.12	
General Help	1,865.44	
Depreciation on Buildings	405.67	
Depreciation on Machinery and Equipment	2,502.75	
Depreciation on Auto	38.84	
Repairs	912.29	
Material and Supplies	300.32	$7,115.05
Power, Light, and Heat:		
Wages—Engineer and Fireman	$ 93.50	
Electricity	1,186.92	
Water	41.85	
Fuel	260.49	1,582.76
Total		$8,697.81

Solution to Problem 95

All that is required in the solution of this problem is the preparation of a tabulated statement showing the operating expense per pound for each kind of silk. The sources of the figures in the following statement can readily be identified in the schedules given in the problem.

SILK-THROWING MILL

OPERATING EXPENSE PER POUND OF SILK SHIPPED

	Shipments (1)	Weights (2)	Product (1×2)	Multiplier (3)	Operating Expense (4)	Operating Expense per Pound (4÷1)
Tram, 28/30 Japan Single.	546 lbs.	1	546 lbs.	$.04064967	$ 22.19	$.040650
Tram, Canton on Cops...	1,114 "	6	6,684 "	"	271.70	.243896
Organzine	1,472 "	8	11,776 "	"	478.69	.325197
Crepe on Bobbins........	3,508 "	18	63,144 "	"	2,566.78	.731693
Crepe on Cops...........	6,591 "	20	131,820 "	"	5,358.45	.812994
Total...............	13,231 "		213,970 "		$8,697.81	

($8,697.81 ÷ 213,970 = $.04064967)

Points Illustrated in Problem 95

(a) Textile Costs. For a discussion of textile costs, see Volume III, Chapters XXVII–XXIX.

(b) Apportionment of Expense. For basis of apportioning expense as between products, see Volume III, Chapter XXII.

(c) Job Order vs. Process Costs. See Volume III, Chapter VII, § 14, for a comparison of job order and process methods.

Problem 96*

From the data contained in the following schedules, prepare a statement showing the cost per pound for winding tram, organzine, and crepe in the winding department of a silk-throwing mill.

*There will be found slight discrepancies in the figures given in this problem, due to the rounding off of decimals.

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Schedule 1

INVENTORY OF WORK IN PROCESS

At Beginning of Period

Tram	$ 40.73	127 lbs.
Organzine	107.61	200 "
Crepe	320.94	3,293 "
Total	$469.28	3,620 "

Schedule 2

DETAILED ANALYSIS OF LABOR AND EXPENSE FOR PERIOD

Labor:	
Tram:	
Japan	$ 118.89
Canton	182.88
28/30 Japan Single	15.74
Organzine	41.07
Crepe	712.06
General:	
Rubbing	11.97
Handing Out Silk	47.61
Soft Silk	48.75
Expense:	
Repairs	184.29
Total	$1,363.26

Schedule 3

PRODUCTION FOR PERIOD

Tram	1,660 lbs.
Organzine	1,272 "
Crepe	10,099 "
Total	13,031 "

Solution to Problem 96

SILK-THROWING MILL

UNIT COSTS—WINDING DEPARTMENT

	Tram	Organ-zine	Crepe	Sub-Total	General	Grand Total
Labor and Expense	$118.89	$ 41.07	$ 712.06	....	$ 184.29	....
	182.88	107.61	320.94	....	11.97	....
	15.74	....	....	....	47.61	....
	40.73	... .	....	....	48.75	....
Total Cost	$ 358.24	$ 148.68	$1,033.00	$1,539.92	$ 292.62	$1,832.54
Percentage Distribution	23.27%	9.65%	67.08%	100.00%	....	. ...
General Expense Distribution	$ 68.09	$ 28.24	$ 196.29	....	....	....
Total, including Pro Rata of General Expense	$ 426.33	$ 176.92	$1,229.29	....	....	$1,832.54
Pounds Wound	1,787	1,472	13,392	....	....	....
Cost per Pound for Winding	$ .238573	$ .120190	$ .091793	....	....	.. ..

(Production plus work in process at beginning of period.)

Points Illustrated in Problem 96

(a) Expense in Process Plants. For a discussion of the method of handling expense in a process department, see Volume III, Chapter XXI, § 8.

(b) Process Costs. See Volume III, Chapter IV, for a discussion of the general method of process cost-finding.

(c) Cost of a Unit of the Product. See Volume III, Chapter IV, § 4, for method of finding cost of a unit of the product.

Problem 97*

From the data contained in the following schedules, prepare a statement showing the cost per pound for

*There will be found slight discrepancies in the figures given in this problem, due to the rounding off of decimals.

spinning tram, organzine, and crepe in the spinning department of a silk-throwing mill.

Schedule 1

INVENTORY OF WORK IN PROCESS

At Beginning of Period

Tram	$ 10.83	127 lbs.
Organzine	130.76	200 "
Crepe	671.11	1,558 "
Total	$812.70	1,885 "

Schedule 2

DETAILED ANALYSIS OF LABOR AND EXPENSE FOR PERIOD

Labor:	
Tram:	
Japan	$ 214.10
Canton	323.41
Organzine	211.75
Crepe	2,454.13
General:	
Bobbin Boy	319.50
End Counter	57.23
Expense:	
Repairs	1,818.28
Total	$5,398.40

Schedule 3

PRODUCTION FOR PERIOD

Tram	1,660 lbs.
Organzine	1,272 "
Crepe	10,099 "
Total	13,031 "

Solution to Problem 97

SILK-THROWING MILL
UNIT COSTS—SPINNING DEPARTMENT

	Tram	Organzine	Crepe	Sub-Total	General	Grand Total
Labor and Expense	$214.10	$ 211 75	$2,454.13	....	$1,818.28	....
	323.41	130.76	671.11	....	319.50	....
	10.83	....	....	....	57.23	....
Total Cost	$ 548.34	$ 342.51	$3,125.24	$4,016.09	$2,195.01	$6,211.10
Percentage of Distribution	13.65%	8 53%	77.82%	100.00%	....	....
General Expense Distribution	$ 299.62	$ 187.23	$1,708.16	$2,195.01	....	....
Total including Pro Rata of General Expense	$ 847.96	$ 529.74	$4,833.40	....	....	$6,211.10
Pounds Spun	1,787	1,472	11,657	....	....	....
Cost per Pound for Spinning	$ .474516	$ .359878	$ .414634	....	....	....

(Production plus work in process at beginning of period)

Problem 98*

From the data contained in the following schedule and the cost accounts taken from the books in a silk-throwing mill, prepare a statement showing the cost of each product for the period and also an analysis of sales.

Schedule 1

SALES FOR PERIOD

28/30 Japan Single Tram	546	lbs.	$ 87.36
Canton Tram on Cops	1,114	"	830.15
Organzine	1,472	"	1,525.31
Crepe on Bobbins	3,508	"	8,602.60
Crepe on Cops	6,591	"	17,357.11
Total	13,231	"	$28,402.53

*There will be found slight discrepancies in the figures given in this problem, due to the rounding off of decimals.

SILK-THROWING MILL

COST ACCOUNTS—PROCESS COST SYSTEM

Soaking Department—Labor and Expense *No. 1*

1	Inventory	$ 361.47	31	28/30 Japan Single Tram			
31	Wages	117.41		Production	546 lbs. at $.083234		$ 45.45
	Materials and Supplies	709.17		Canton Tram on Cops			
	Repairs	209.13		Production	1,114 lbs. " "		92.72
				Organzine			
				Production	1,472 " " "		122.52
				Crepe on Bobbins			
				Production	3,508 " " "		291.99
				Crepe on Cops			
				Production	6,591 " " "		548.60
				Inventory	3,555 " " "		295.90
		$1,397.18			16,786 " " "		$1,397.18

($1,397.18 ÷ 16,786 = $.083234)

Winding Department—Tram—Labor and Expense *No. 2*

31	Labor and Expense	$426.33	31	28/30 Japan Single Tram			
				Production	546 lbs. at $.238572		$130.26
				Canton Tram on Cops			
				Production	1,114 lbs. " "		265.77
				Inventory	127 " " "		30.30
		$426.33			1,787 " " "		$426.33

WINDING DEPARTMENT—ORGANZINE—LABOR AND EXPENSE *No. 3*

31	Labor and Expense	$176.92	31	Production 1,472 lbs. at $.12019		$176.92

WINDING DEPARTMENT—CREPE—LABOR AND EXPENSE *No. 4*

31	Labor and Expense	$1,229.29	31	Crepe on Bobbins		
				Production	3,508 lbs. at $.091793	$ 322.01
				Crepe on Cops		
				Production	6,591 " " "	605.01
				Inventory	3,293 " " "	302.27
		$1,229.29			13,392 " " "	$1,229.29

DOUBLING DEPARTMENT—LABOR AND EXPENSE *No. 5*

1	Inventory	$ 231.21	31	Crepe on Bobbins		
31	Wages	993.37		Production	3,508 lbs. at $.098168	$ 344.38
	Repairs	4.20		Crepe on Cops		
				Production	6,591 " " "	647.02
				Inventory	2,418 " " "	237.38
		$1,228.78			12,517 " " "	$1,228.78

Spinning Department—Tram—Labor and Expense — *No. 6*

1	Inventory	$ 10.83	31	28/30 Japan Single Tram	
31	Labor and Expense	837.13		Production 546 lbs. at $.474515	$259.09
				Canton Tram on Cops	
				Production 1,114 lbs. " "	528.61
				Inventory 127 " " "	60.26
		$847.96		1,787 " " "	$847.96

Spinning Department—Organzine—Labor and Expense — *No. 7*

1	Inventory	$130.76	31	Production 1,472 lbs. at $.359877	$529.74
31	Labor and Expense	398.98			
		$529.74			$529.74

Spinning Department—Crepe—Labor and Expense — *No. 8*

1	Inventory	$ 671.11	31	Crepe on Bobbins	
31	Labor and Expense	4,162.29		Production 3,508 lbs. at $.414635	$1,454.54
				Crepe on Cops	
				Production 6,591 " " "	2,732.85
				Inventory 1,558 " " "	646.01
		$4,833.40		11,657 " " "	$4,833.40

Copping Department—Labor and Expense *No. 9*

31	Labor and Expense	$1,056.57	31	Canton Tram on Cops		
				Production	1,114 lbs. at $.137127	$ 152.76
				Crepe on Cops		
				Production	6,591 " " "	903.81
		$1,056.57			7,705 " " "	$1,056.57

Reeling Department—Labor and Expense *No. 10*

31	Labor and Expense	$119.06	31	28/30 Japan Single Tram		
				Production	546 lbs. at $.058999	$ 32.21
				Organzine		
				Production	1,472 " " "	86.85
		$119.06			2,018 " " "	$119.06

Shipping Department—Labor and Expense — No. 11

31 Labor and Expense	$689.97	31 28/30 Japan Single Tram			
		Production	546 lbs. at $.052148		$ 28.47
		Canton Tram on Cops			
		Production	1,114 lbs. " "		58.09
		Organzine			
		Production	1,472 " " "		76.76
		Crepe on Bobbins			
		Production	3,508 " " "		182.94
		Crepe on Cops			
		Production	6,591 " " "		343.71
	$689.97		13,231 " " "		$689.97

Operating—Expense* — No. 12

31 Sundries	$8,697.81	31 28/30 Japan Single Tram			
		Production	546 lbs. at	$.040645	$ 22.19
		Canton Tram on Cops			
		Production	1,114 lbs. "	.243895	271.70
		Organzine			
		Production	1,472 " "	.325196	478.69
		Crepe on Bobbins			
		Production	3,508 " "	.731693	2,566.78
		Crepe on Cops			
		Production	6,591 " "	.812994	5,358.45
	$8,697.81		13,231 "		$8,697.81

* See Problem 95 for distribution.

OFFICE EXPENSE — No. 13

31 Sundries	$301.30	31 28/30 Japan Single Tram				
		Production	546 lbs.	at $.001410	$	.77
		Canton Tram on Cops				
		Production	1,114 lbs.	" .008449		9.41
		Organzine				
		Production	1,472 "	" .011263		16.58
		Crepe on Bobbins				
		Production	3,508 "	" .025348		88.91
		Crepe on Cops				
		Production	6,591 "	" .028164		185.63
	$301.30		13,231			$301.30

GENERAL EXPENSE — No. 14

31 Sundries	$1,109.41	31 28/30 Japan Single Tram				
		Production	546 lbs.	at $.005183	$	2.83
		Canton Tram on Cops				
		Production	1,114 lbs.	" .031108		34.66
		Organzine				
		Production	1,472 "	" .041479		61.06
		Crepe on Bobbins				
		Production	3,508 "	" .093327		327.39
		Crepe on Cops				
		Production	6,591 "	" .103698		683.47
	$1,109.41		13,231			$1,109.41

Solution to Problem 98

SILK-THROWING MILL

DETAILED ANALYSIS OF COSTS FOR PERIOD

28/30 JAPAN SINGLE TRAM

Operation	Pounds	Cost	Amount
Soaking	546	$.083234	$ 45.45
Winding	"	.238572	130.26
Spinning	"	.474515	259.09
Reeling	"	.058999	32.22
Shipping	"	.052148	28.47
Operating	"	.040645	22.19
Office	"	.001410	.77
General	"	.005183	2.83
Total	546	$.954706	$521.28

CANTON TRAM ON COPS

Operation	Pounds	Cost	Amount
Soaking	1,114	$.083234	$ 92.72
Winding	"	.238572	265.77
Spinning	"	.474515	528.61
Copping	"	.137127	152.76
Shipping	"	.052148	58.09
Operating	"	.243895	271.70
Office	"	.008449	9.41
General	"	.031108	34.66
Total	1,114	$1.269048	$1,413.72

ORGANZINE

Operation	Pounds	Cost	Amount
Soaking	1,472	$ .083234	$ 122.52
Winding	"	.120190	176.92
Spinning	"	.359877	529.74
Reeling	"	.058999	86.84
Shipping	"	.052148	76.76
Operating	"	.325196	478.69
Office	"	.011263	16.58
General	"	.041479	61.06
Total	1,472	$1.052386	$1,549.11

CREPE ON BOBBINS

Operation	Pounds	Cost	Amount
Soaking	3,508	$ .083234	$ 291.99
Winding	"	.091793	322.01
Doubling	"	.098168	344.38
Spinning	"	.414635	1,454.54
Shipping	"	.052148	182.94
Operating	"	.731693	2,566.78
Office	"	.025348	88.91
General	"	.093327	327.39
Total	3,508	$1.590346	$5,578.94

(See analysis of crepe on cops costs, page 367.)

SILK-THROWING MILL

ANALYSIS OF SALES

Description	Pounds	Cost		Sales		Profit		Loss	
		Total	Per Pound	Total	Per Pound	Total	Per Pound	Total	Per Pound
28/30 Japan Single Tram....	546	$ 521.28	$ .954706	$ 87.36	$ .160000	....	....	$ 433.92	$.794705
Canton Tram on Cops......	1,114	1,413.72	1.269048	830.15	.745197	....	....	583.57	.541054
Organzine	1,472	1,549.11	1.052386	1,525.31	1.036216	....	....	23.80	.016179
Crepe on Bobbins..........	3,508	5,578.94	1.590346	8,602.60	2.452280	$3,023.66	$.861936	....	....
Crepe on Cops............	6,591	12,008.55	1.821961	17,357.11	2.633456	5,348.56	.811495	....	....
Total..............	13,231	$21,071.60	$1.592593	$28,402.53	$2.146665	$8,372.22	....	$1,041.29	....

Recapitulations:

Total Profit	$8,372.22
Less—Total Loss	1,041.29
Operating Profit	$7,330.93

CREPE ON COPS

Operation	Pounds	Cost	Amount
Soaking	6,591	$ .083234	$ 548.60
Winding	"	.091793	605.01
Doubling	"	.098168	647.02
Spinning	"	.414635	2,732.85
Copping	"	.137127	903.81
Shipping	"	.052148	343.71
Operating	"	.812994	5,358.45
Office	"	.028164	185.63
General	"	.103698	683.47
Total	6,591	$1.821961	$12,008.55

(Grand Total Cost of Sales, $21,071.60)

Points Illustrated in Problem 98

(a) Process Costs. For a discussion of the entries in a department process account, see Volume III, Chapter VII, § § 9 and 10.

Problem 99

The Department of Street-Cleaning operates a stable where the horses are cared for, a mechanical department where the mechanics are located who make the necessary repairs to the buildings and equipment, and a storehouse from which articles used in the various divisions of the department are issued. The city is divided into street-cleaning districts in charge of superintendents, and the districts are subdivided into sections in charge of foremen. After the streets have been cleaned in each district and section, it is necessary for the Department to cart the rubbish away and dispose of it.

From the data given in the following schedules, prepare a statement showing: (1) the total cost of operating the Street-Cleaning Department; (2) the cost of sweeping and cleaning per square yard; (3) carting and stable per cubic yard; (4) the cost of final disposition per cubic yard; and (5) cost of snow removal per cubic yard.

Schedule 1

OPENING INVENTORY

	Initial Cost
Land	$500,000.00
Buildings	750,000.00
Equipment	600,000.00
Stores	100,000.00
Repair Jobs in Process	25,000.00

It is estimated that the land, buildings, and equipment belonging to the Department of Street-Cleaning are used in the following proportions for the different activities:

	Land	Buildings	Equipment
General Administration	5%	5%	5%
Repair Division	10	10	10
Sweeping and Cleaning	15	10	30
Carting and Stable	45	55	40
Final Disposition	20	15	10
Snow Removal	5	5	5
	100%	100%	100%

Schedule 2

FIXED CHARGES

It is estimated that the depreciation on buildings amounts to 3% and on equipment to 10% a year. The loss to the city by reason of exemption of land and buildings from taxation amounts to \$1.84 per \$100. Interest amounts to 4% on the initial cost.

Schedule 3

PURCHASES

The purchases for the year were as follows:

General Administration	\$ 25,000.00
Repair Division	10,000.00
Sweeping and Cleaning	50,000.00
Carting and Stable	40,000.00
Final Disposition	200,000.00
Snow Removal	10,000.00

Schedule 4

STORES ISSUED

The stores issued for the year were as follows:

General Administration	\$ 10,000.00
Repair Division	40,000.00
Sweeping and Cleaning	250,000.00
Carting and Stable	50,000.00
Final Disposition	20,000.00
Snow Removal	5,000.00

Schedule 5

PAY-ROLL DISTRIBUTION

The pay-roll for the year was as follows:

General Administration	\$100,000.00
Repair Division	50,000.00
Sweeping and Cleaning	500,000.00

Carting and Stable	45,000.00
Final Disposition	15,000.00
Snow Removal	45,000.00

Schedule 6

GENERAL ADMINISTRATION

The general administration expense of the Street-Cleaning Department for the year is to be distributed on the following bases:

Repair Division	10%
Sweeping and Cleaning	50
Carting and Stable	15
Final Disposition	10
Snow Removal	15
	100%

Schedule 7

REPAIR DIVISION

The repair division reports work done as follows:

Sweeping and Cleaning	30%
Carting and Stable	40
Final Disposition	15
Snow Removal	15
	100%

Schedule 8

WORK UNITS

The number of yards estimated to be covered by each unit is as follows:

Sweeping and Cleaning	2,000,000 sq. yds.
Carting and Stable	4,500,000 cu. yds.
Final Disposition	4,500,000 " "
Snow Removal	6,000,000 " "

Solution to Problem 99

STREET-CLEANING DEPARTMENT

STATEMENT OF COST

	Total Cost	General Administrative Expense	Repair Division	Sweeping and Cleaning	Carting and Stable	Final Disposition	Snow Removal
Opening Inventory:							
Land	$ 500,000.00	$ 25,000.00	$ 50,000.00	$ 75,000.00	$225,000.00	$100,000.00	$ 25,000.00
Buildings	750,000.00	37,500.00	75,000.00	75,000.00	412,500.00	112,500.00	37,500.00
Equipment	600,000.00	30,000.00	60,000.00	180,000.00	240,000.00	60,000.00	30,000.00
	$1,850,000.00	$ 92,500.00	$185,000.00	$330,000.00	$877,500.00	$272,500.00	$ 92,500.00
Depreciation:							
Buildings ... 3%	$ 22,500.00	$ 1,125.00	$ 2,250.00	$ 2,250.00	$ 12,375.00	$ 3,375.00	$ 1,125.00
Equipment ... 10%	60,000.00	3,000.00	6,000.00	18,000.00	24,000.00	6,000.00	3,000.00
Exemption from Taxation:							
Land ... 1.84% Buildings ... 1.84%	23,000.00	1,150.00	2,300.00	2,760.00	11,730.00	3,910.00	1,150.00
Interest:							
Land, Buildings and Equipment ... 4%	74,000.00	3,700.00	7,400.00	13,200.00	35,100.00	10,900.00	3,700.00
Stores ... 4%	4,000.00	4,000.00	....	....	....	....	....
Process ... 4%	1,000.00	1,000.00	....	....	....	....	....
Total Fixed Charges	$ 184,500.00	$ 13,975.00	$ 17,950.00	$ 36,210.00	$ 83,205.00	$ 24,185.00	$ 8,975.00
Purchases	335,000.00	25,000.00	10,000.00	50,000.00	40,000.00	200,000.00	10,000.00
Stores	375,000.00	10,000.00	40,000.00	250,000.00	50,000.00	20,000.00	5,000.00
Pay-Roll	755,000.00	100,000.00	50,000.00	500,000.00	45,000.00	15,000.00	45,000.00
	$1,649,500.00	$148,975.00	$117,950.00	$836,210.00	$218,205.00	$259,185.00	$ 68,975.00
Distribution of Administrative Expense	....	....	10%	50%	15%	10%	15%
	....	....	14,897.50	74,487.50	22,346.25	14,897.50	22,346.25
	$1,649,500.00	....	$132,847.50	$910,697.50	$ 240,551.25	$274,082.50	$ 91,321.25
Distribution of Repairs	....	....	....	30%	40%	15%	15%
	....	....	....	39,854.25	53,139.00	19,927.12	19,927.13
Total	$1,649,500.00	....	....	$950,551.75	$293,690.25	$294,009.62	$111,248.38
Work Units	....	....	....	2,000,000	4,500,000	4,500,000	6,000,000
Cost per Unit	....	....	....	$.4753	$.0653	$.0653	$.0185

Points Illustrated in Problem 99

(a) Unit Costs. For the method of determining the cost of a unit of the product or service see Volume III, Chapter IV, § 4.

Problem 100

On January 1, 1914, the Arlington Company's records show the following conditions of its accounts:

Inventory of raw materials $46,864.26; accrued factory pay-roll, applied and distributed, $2,495.34; goods in process at prime cost $191,665.32; the further value of $24,111.51 for the factory overhead, also $36,224.76 to cover superintendence; finished goods in stock show a total cost of $64,968.03.

During the period from January 1 to December 31, 1914, purchases of raw materials amounted to $241,-249.35; factory pay-rolls $377,381.70; superintendence $114,300; factory expenses, including wages not applied to cost accounts, $74,538; interest paid on notes $3,600; dividends received $15,012.

During the period mentioned, the operations in the factory comprised: raw materials requisitioned for consumption $239,461.02; wages applied and distributed to manufacturing cost $360,751.20; and to factory expenses $17,878.17, included in the sum stated in the paragraph above.

There were also forwarded from the factory to the warehouse, finished goods at prime cost, covering materials $235,627.74, and labor $355,001.25. The cost of goods sold during the year was $755,849.70, and the proceeds from goods sold $907,019.64.

On December 31, 1914, the goods in process included, in addition to prime cost, factory overhead amounting to $25,317.06, and superintendence $38,-035.98, and accrued factory pay-roll, applied and distributed, amounting to $3,743.01.

Show the cost controlling accounts as they would appear in the general ledger, their operation, and the resulting net profit.

(*New York C. P. A. Examination.*)

Solution to Problem 100

The following journal entries show in proper sequence the transactions of the Arlington Company for the period from January 1, 1914, to December 31, 1914, as they affected the cost accounts:

Goods in Process		$239,461.02	
Raw Material			$239,461.02
Raw materials requisitioned.			
Goods in Process		360,751.20	
Pay-Roll			360,751.20
Wages applied and distributed to manufacturing costs.			
Finished Goods		590,628.99	
Goods in Process			590,628.99
To charge Finished Goods with the prime cost of goods transferred from factory to warehouse during year as follows:			
Raw Materials	$235,627.74		
Labor	355,001.25		

Manufacturing Expenses	73,332.45	
Factory Overhead Expense		73,332.45
To close into Manufacturing Expenses the factory expenses applicable to the year ended December 31.		
Manufacturing Expenses	112,488.78	
Superintendence		112,488.78
To close into Manufacturing Expenses the cost of superintendence applicable to the year ended December 31.		
Finished Goods	185,821.23	
Manufacturing Expenses		185,821.23
To close the Manufacturing Expenses into the cost of finished goods.		
Sales	755,849.70	
Finished Goods		755,849.70
To charge Sales account with the cost of finished goods sold.		
Sales	151,169.94	
Profit and Loss		151,169.94
Gross profit on sales.		
Income from Securities	15,012.00	
Interest on Notes Payable		3,600.00
Profit and Loss		11,412.00
To close all nominal accounts into Profit and Loss.		

Raw Material

1914			1914		
Jan. 1	Balance	$ 46,864.26	Dec. 31	Requisitioned	$239,461.02
Dec. 31	Purchases ...	241,249.35		Balance	48,652.59
		$288,113.61			$288,113.61
1915					
Jan. 1	Balance	$ 48,652.59			

Factory Pay-Roll

1914			1914		
Dec. 31	Year's Pay-Roll	$377,381.70	Jan. 1	Accrued	$ 2,495.34
	Balance	3,743.01	Dec. 31	Mfg. Cost ..	360,751.20
				Factory Wages	17,878.17
		$381,124.71			$381,124.71
			1915		
			Jan. 1	Balance	$3,743.01

Goods in Process—Prime Cost

1914			1914		
Jan. 1	Prime Cost	$191,665.32	Dec. 31	Finished Gds.	$590,628.99
Dec. 31	Raw Material	239,461.02		Balance	201,248.55
	Wages	360,751.20			
		$791,877.54			$791,877.54
1915					
Jan. 1	Balance	$201,248.55			

Finished Goods

1914			1914		
Jan. 1	Balance	$ 64,968.03	Dec. 31	Cost of Sales	$755,849.70
Dec. 31	Prime Cost .	590,628.99		Balance	85,568.55
	Mfg. Exp. ..	185,821.23			
		$841,418.25			$841,418.25
1915					
Jan. 1	Balance	$ 85,568.55			

Sales

1914			1914		
Dec. 31	Cost of Sales.	$755,849.70	Dec. 31	....	$907,019.64
	Gross Profit	151,169.94			
		$907,019.64			$907,019.64

Superintendence

1914			1914		
Jan. 1	Undistributed	$ 36,224.76	Dec. 31	Mfg. Exp. ..	$112,488.78
Dec. 31	....	114,300.00		Balance	38,035.98
		$150,524.76			$150,524.76
1915					
Jan. 1	Balance	$ 38,035.98			

Factory Overhead Expense

1914			1914		
Jan. 1	Undistributed	$ 24,111.51	Dec. 31	Mfg. Exp. ..	$ 73,332.45
Dec. 31	Factory Expense	74,538.00		Balance	25,317.06
		$ 98,649.51			$ 98,649.51
1915					
Jan. 1	Balance	$ 25,317.06			

Interest on Notes Payable

1914			1914		
Dec. 31	....	$ 3,600.00	Dec. 31	Profit & Loss	$ 3,600.00

Income from Securities

1914			1914		
Dec. 31	Profit & Loss	$ 15,012.00	Dec. 31	Dividends Received ..	$ 15,012.00

Manufacturing Expenses

1914			1914		
Dec. 31	Overhead ...	$ 73,332.45	Dec. 31	Finished Goods	$185,821.23
	Superintendence	112,488.78			
		$185,821.23			$185,821.23

Profit and Loss

1914			1914		
Dec. 31	Interest	$ 3,600.00	Dec. 31	Gross Profits	$151,169.94
	Balance	162,581.94		Securities ...	15,012.00
		$166,181.94			$166,181.94
			1915		
			Jan. 1	Balance	$162,581.94

Points Illustrated in Problem 100

(a) Elements of Cost. See Volume III, Chapter II, § 1.
(b) Controlling Cost Accounts. See Volume III, Chapter VII, for a description of the ledger accounts usually required.
(c) Profit and Loss. See Volume III, Chapter IX, § 3.

Problem 101

A lumber company issues the following statement, and one of the stockholders submits it to you as he cannot understand how 135,000 ft. sold at average of $8.15 per 1,000 can produce a profit of $370, with a cost of $6.50 per 1,000. Make your report with reasons why the statement is in error, and illustrate with a new statement of operation, applying the inventories where they correctly belong at proper value and showing the cost of each operation and the cost of the material as it works through from operation to operation.

PINE TOP LUMBER COMPANY

STATEMENT OF OPERATION

June 1, 1913

			Average Cost
	Income		
Sales:			
100,000 ft. Rough Lumber		$ 750.00	$ 7.50
35,000 ft. Dressed Lumber		350.00	10.00
		$1,100.00	$ 8.15
	Expenses		
Logging,	400,000 ft.	$1,200.00	$ 3.00
Hauling to Mill,	300,000 ft.	300.00	1.00
Sawing at Mill,	200,000 ft.	300.00	1.50
Planing,	50,000 ft.	50.00	1.00
		$1,850.00	$ 6.50

Less—Inventory (estimated value):				
100,000 ft. Logs in Woods	at $2.50 ...	$250.00		
100,000 " Logs at Mill	" 4.00 ...	400.00		
50,000 " Rough Lumber	" 7.00 ...	350.00		
15,000 " Dressed Lumber	" 8.00 ...	120.00	1,120.00	
Cost.			$ 730.00	
Profit			370.00	$1,100.00

(Virginia C. P. A. Examination.)

Solution to Problem 101

PINE TOP LUMBER COMPANY
STATEMENT OF OPERATION
From........ to June 1, 1913

					Average per M Ft.
Sales:					
100,000 ft. Rough Lumber				$ 750.00	$ 7.50
35,000 " Dressed Lumber				350.00	10.00
Total				$1,100.00	$ 8.15
Cost of Lumber Sold:					
Logging: Total ...	400,000 ft.	at $3.00	$1,200.00		
Less—Inventory	100,000	" " 3.00	300.00		
Hauling to Mill:					
Cost of Logs ...	300,000	" " 3.00	$ 900.00		
Hauling		" 1.00	300.00		
Total			$1,200.00		
Less—Inventory	100,000	" " 4.00	400.00		
Sawing:					
Cost of Logs ...	200,000	" " 4.00	$ 800.00		
Sawing		" 1.50	300.00		
Total			$1,100.00		
Less—Inventory	50,000	" " 5.50	275.00		
Net	150,000	" " 5.50	$ 825.00		
Sales	100,000	" " 5.50	550.00	$ 550.00	$ 5.50
Planing:					
Cost Rough Lumber	50,000	" " 5.50	$ 275.00		

Planing		ft. at	1.00	50.00		
Total				$ 325.00		
Less—Inventory	15,000	" "	6.50	97.50		
Sales	35,000	" "	6.50		227.50	6.50
Total					$ 777.50	$ 5.76
Gross Profit					$ 322.50	$ 2.39

Comments on Problem 101

The statement submitted by the company showed a profit of $370. The excess of $47.50 is due to the following errors in the inventories:

	Company Valuation	Correct Valuation	Over-Valuation
100,000 ft. of Logs in Woods	$2.50	$3.00	*$50.00*
50,000 " " Rough Lumber	7.00	5.50	75.00
15,000 " " Dressed Lumber	8.00	6.50	22.50
Net Over-Valuation			$47.50

The company's statement that the average cost was $6.50 is wrong because in that figure the inventories are not taken into account and because it makes no distinction between rough lumber and dressed lumber which cost, respectively, $5.50 and $6.50.

No provision for depletion has been made unless it is included in the reported operating costs.

This problem illustrates the fact that the average of a group total is not the average of the individual averages within the group when there is substantial variation in quantities and prices of detail items.

Points Illustrated in Problem 101

(a) Procedure in Keeping Cost Accounts. See Volume III, Chapter VI, for the operation of cost accounts.

(b) Profit and Loss Account. See Volume III, Chapter IX, for a description of a Profit and Loss account.

Problem 102

A company of bicycle manufacturers makes up its accounts December 31, 1907, for the year. The following are the debits to the Profit and Loss account:

Raw Material on Hand January 1, 1907	$12,500.00
Finished Machines on Hand January 1, 1907, 1,600 wheels at $30	48,000.00
Purchases of Material	62,500.00
Labor, Productive	82,500.00
Manufacturing Expenses: Coal, repairs, paint, varnish, superintendents' salaries, unproductive labor and sundry other expenses	23,000.00
Agents' Commissions	90,000.00
Branch Expense: Rents, salaries and miscellaneous	40,000.00
Selling Expense: Travelers' expenses and salaries, discounts, rebates and miscellaneous	30,000.00
Bad Debts	8,000.00
Depreciation on Machinery and Plant	5,500.00

The sales for the year 1907 were 6,000 wheels, yielding $540,000; the raw materials on December 31, 1907, taken at cost, were $4,000, and the finished wheels in stock ready for sale numbered 800. Prepare an account from the above showing:

(a) Number of wheels manufactured.
(b) The cost per wheel.
(c) The gross manufacturing profit.
(d) The final net result, including in the Profit and Loss account the stock of finished wheels on hand December 31, 1907, at their cost as shown by the accounts.

(Michigan C. P. A. Examination.)

Solution to Problem 102

(a)

NUMBER OF WHEELS MANUFACTURED

Number of wheels sold during the year 1907	6,000	
Deduct—Wheels on hand January 1, 1907	1,600	
Balance represents new wheels sold		4,400
Add—Wheels on hand December 31, 1907		800
Total represents new wheels manufactured		5,200

(b)

COST PER WHEEL

Raw Materials Used:			
Inventory, January 1, 1907	$ 12,500.00		
Purchases for the year	62,500.00	$ 75,000.00	
Deduct—Inventory, December 31, 1907		4,000.00	$ 71,000.00
Productive Labor			82,500.00
Manufacturing Overhead Expenses:			
Manufacturing Expenses		$ 23,000.00	
Depreciation on Machinery and Plant		5,500.00	28,500.00
Total Manufacturing Cost			$182,000.00

5,200 wheels at a total cost of $182,000 show a unit cost of $35.

(c) and (d)

GROSS MANUFACTURING PROFIT

NET PROFIT

Sales			$540,000.00
Deduct—Cost of Goods Sold:			
Inventory of Finished Goods on hand January 1, 1907 (1,600 wheels at $30)	$ 48,000.00		
Cost of Wheels Manufactured	182,000.00	$230,000.00	

Less—Inventory at December 31, 1907 (800 wheels at $35)	28,000.00	202,000.00
Gross Manufacturing Profit (c)		$338,000.00
Less—Expenses:		
Agents' Commissions	$ 90,000.00	
Selling Expense	30,000.00	
Branch Expense	40,000.00	160,000.00
Net Profit from Operations		$178,000.00
Deduct—Other Charges:		
Loss on Bad Debts		8,000.00
Net Profit (d)		$170,000.00

Points Illustrated in Problem 102

(a) Definition of Elements of Cost. See Volume III, Chapter II, §§ 1 and 8, for a discussion of the items entering into cost.

(b) Cost Accounting Routine. See Volume III, Chapter VI, for a description of the operation of cost accounts.

Problem 103

Draw up a brief but effective classification of general ledger accounts suitable for a company with a total capital investment of, say, $750,000, doing an annual business of about $1,000,000, employing about 300 men and with 500 customers' accounts. Assume the company manufactures and sells to dealers bicycles of ten different patterns and styles and does a small business in the sale of duplicate parts. The accounts are so framed as to permit the preparation monthly of an approximate balance sheet and approximate profit and loss account without the taking of a physical inventory except at the annual closing on September 30 of each year.

State the classification in the order in which, in your opinion, the accounts should appear in the ledger, giving briefly your reasons therefor, and indicate which accounts, if any, should be supplemented with subsidiary ledgers or other subsidiary account records, bearing in mind that the object is to facilitate the preparation of the monthly statements required.

Solution to Problem 103

BICYCLE MANUFACTURING COMPANY

CLASSIFICATION OF ACCOUNTS

100–700 Assets and Deferred Charges

100 Land, Buildings, and Equipment (Details carried in subsidiary ledger, subsidiary accounts being numbered from 101 to 199.)
200 Materials and Supplies—Inventory
300 Customers' Accounts (Details carried in subsidiary ledger.)
400 Sundry Debtors (Details carried in subsidiary ledger.)
500 Notes Receivable (Details carried in subsidiary note register or ledger.)

600 Cash Items:
- 601 Bank Balance
- 602 Petty Cash Fund

700 Deferred Charges:
- 701 Prepaid Interest
- 702 Prepaid Insurance
- 703 Prepaid Taxes
- 704 Organization Expenses

800–1100 Capital Stock, Liabilities, Reserves, and Surplus

800 Capital Liabilities:
- 801 Preferred Stock (Details carried in stock ledger.)
- 802 Common Stock (Details carried in stock ledger.)
- 803 First Mortgage 6% Bonds

900 Current Liabilities:
- 901 Notes Payable
- 902 Unpaid Audited Vouchers
- 903 Sundry Creditors Ledger
- 904 Accrued Interest on Bonds
- 905 Accrued Taxes

(Details of accounts Nos. 901, 902, and 903 carried in subsidiary ledgers or records.)

1000 Reserves:
- 1001 Reserve for Depreciation—Buildings
- 1002 Reserve for Depreciation—Machinery and Equipment
- 1003 Reserve for Depreciation—Office Furniture and Fixtures
- 1004 Reserve for Bad Debts
- 1005 Reserve for Freight and Discounts

1100 Surplus Account

1500–2500 Profit and Loss Accounts

1500 Raw Material Purchases:
- 1501–1511 (Subsidiary accounts to be kept only in the event distribution between styles or types of bicycles is obtainable.)

1600 Productive Labor:
- 1601–1611 (Subsidiary accounts to be kept only in the event distribution between styles or types of bicycles is obtainable.)

1700 Factory Expenses:
- 1701 Foremen's Salaries

- 1702 Non-Productive Labor
- 1703 Heat and Light
- 1704 Supplies
- 1705 Repairs and Renewals
  - 1705A Machinery and Equipment
  - 1705B Buildings
- 1706 Taxes
- 1707 Insurance
- 1708 Depreciation
  - 1708A Machinery and Equipment
  - 1708B Buildings
- 1709 Miscellaneous Factory Expenses

1800 Selling Expenses:
- 1801 Salesmen's Salaries
- 1802 Salesmen's Traveling Expenses
- 1803 Advertising
- 1804 Miscellaneous Selling Expenses

1900 General and Administrative Expenses:
- 1901 Officers' Salaries
- 1902 Office Salaries
- 1903 Stationery and Printing
- 1904 Telephone and Telegraph
- 1905 Traveling Expenses
- 1906 General Office Expenses

2000 Sales:
- 2001–2011 (Subsidiary accounts to be kept for sales of various styles or types of bicycles and finished parts.)

2100 Miscellaneous Income Accounts:
- 2101 Interest on Daily Bank Balances
- 2102 Discount on Purchases
- 2103 Interest on Notes Receivable

2200 Miscellaneous Expense Accounts:
- 2201 Interest on Borrowed Money
- 2202 Discount on Sales

In arriving at the approximate inventory at the end of each month, it is assumed that:

1. Estimated or test costs of the various styles of bicycles are available.
2. That the approximate cost of duplicate parts is known.

In this case the method of arriving at an approximate inventory each month would be as follows:

Total charges contained in the controlling accounts:	
Account No. 200	$.........
Account No. 1500	....
Account No. 1600	....
Account No. 1700	....
Total	$.........
Deduct—Estimated cost of bicycles and duplicate parts upon basis referred to in (1) and (2) above	....
Balance—Approximate Inventory	$.........

Points Illustrated in Problem 103

(a) Controlling Cost Accounts. For a description of cost accounts see Volume III, Chapter VII.

(b) Routine for Handling Cost Accounts. See Volume III, Chapter VI, for a description of the operation of cost accounts.

Problem 104*

From the data contained in the following schedules make a calculation of the cost per chargeable or "sold"

*There will be found slight discrepancies in the figures given in this problem, due to the rounding off of decimals.

hour, as it is often called, for labor and expense combined, in a job printing establishment. The period covered, for the purposes of this calculation, is one month of average production in a plant of this capacity.

Schedule 1

DISTRIBUTION OF RENT

The annual rent paid is $36,060, and is to be prorated on the basis of productive floor area which is found to be as follows by measurement:

Departments and Factory Divisions	Square Feet
Proof-Reading	740
Hand Composition	6,817
Keyboard Monotype	288
Casters	634
Plate Finishing and Repairing	346
Job Press Department:	
Kelly Presses	834
Victoria and Caxton Presses	417
Universal Presses	1,424
Gordon Press	208
Cylinder Press Department:	
Pony Press	1,005
00, 1-Color Presses	3,519
000, 2 " "	4,019
0000, 1 " "	7,168
00000, 1 " "	2,010
00000, 2 " "	2,010
Webb Press Department:	
64-page, 2-Color Presses	5,213
32 " 2 " "	1,299
32 " 1 " "	3,896
64 " 1 " "	1,303
Cutting	1,000
Total	44,150

Schedule 2

DISTRIBUTION OF POWER

The power bill for the month amounted to $1,940.58, and is to be prorated on the basis of the horse-power hours which are as follows:

Departments and Factory Divisions	Horse-Power Hours
Keyboard Monotype	413
Casters	623
Plate Finishing and Repairing	456
Job Press Department:	
Kelly Presses	646
Victoria and Caxton Presses	306
Universal Presses	375
Gordon Press	48
Cylinder Press Department:	
Pony Press	81
00, 1-Color Presses	1,806
000, 2 " "	6,160
0000, 1 " "	6,096
00000, 1 " "	1,463
00000, 2 " "	3,880
Webb Press Department:	
64-page, 2-Color Presses	33,995
32 " 2 " "	4,973
32 " 1 " "	11,020
64 " 1 " "	8,036
Cutting	974
Total	81,351

Schedule 3

DISTRIBUTION OF DEPRECIATION

Depreciation is taken at 15% per year on the plant investment which is as follows:

Departments and Factory Divisions	Plant Investment
General and Office	$ 79,467.92
Hand Composition	46,063.04

Keyboard Monotype	3,548.00
Casters	23,343.81
Plate Finishing and Repairing	1,836.94
Job Press Department:	
Kelly Presses	10,125.94
Victoria and Caxton Presses	2,541.89
Universal Presses	5,748.07
Gordon Press	462.86
Cylinder Press Department:	
Pony Press	1,286.92
00, 1-Color Presses	17,538.60
000, 2 " "	44,770.30
0000, 1 " "	43,128.96
00000, 1 " "	11,703.37
00000, 2 " "	24,890.25
Webb Press Department:	
64-page, 2-Color Presses	122,941.58
32 " 2 " "	32,819.03
32 " 1 " "	60,757.62
64 " 1 " "	29,534.41
Cutting	2,923.42
Total	$565,432.93

Schedule 4

PAY-ROLL ANALYSIS

The analysis of the factory pay-roll for the month appears as follows:

Departments and Factory Divisions	Pay-Roll
General and Office	$ 1,408.02
Shipping	3,136.06
Proof-Reading	1,223.06
Hand Composition	7,378.29
Keyboard Monotype	411.42
Casters	427.79
Plate Finishing and Repairing	385.02
Job Press Department:	
Kelly Presses	798.59
Victoria and Caxton Presses	286.67
Universal Presses	880.50
Gordon Press	81.91

Cylinder Press Department:	
Pony Press	187.34
00, 1-Color Presses	1,217.69
000, 2 " "	2,248.05
0000, 1 " "	3,746.76
00000, 1 " "	749.35
00000, 2 " "	1,217.70
Webb Press Department:	
64-page, 2-Color Presses	9,543.73
32 " 2 " "	2,832.17
32 " 1 " "	6,034.05
64 " 1 " "	2,113.97
Cutting	371.48
Slip Sheeting—Job Department	34.15
Slip Sheeting—Cylinder Press Department	78.96
Wrapping—Job Department	116.72
Total	$46,909.45

In addition to the foregoing, there are office salaries of $2,752.75 and executive salaries of $4,766.66 for the month.

Schedule 5

ANALYSIS OF DEPARTMENTAL PURCHASES

The analysis of purchases chargeable to departmental accounts is as follows for the month:

Departments and Factory Divisions	Purchases
General and Office	$1,735.81
Shipping	237.29
Hand Composition	332.43
Keyboard Monotype	47.65
Casters	70.98
Plate Finishing and Repairing	8.53
Job Press Department:	
Kelly Presses	30.03
Victoria and Caxton Presses	16.36
Universal Presses	59.96
Gordon Press	5.19
Cylinder Press Department:	
Pony Press	23.98
00, 1-Color Presses	160.82

000, 2-Color Presses	295.99
0000, 1 " "	493.59
00000, 1 " "	112.64
00000, 2 " "	151.19
Webb Press Department:	
64-page, 2-Color Presses	1,219.03
32 " 2 " "	287.27
32 " 1 " "	1,299.16
64 " 1 " "	304.00
Cutting	21.45
Total	$6,943.35

Schedule 6

CHARGEABLE HOURS

The chargeable hours for the period are reported to be as follows:

Departments and Factory Divisions	Chargeable Hours
Hand Composition	6,113
Keyboard Monotype	413
Casters	570
Plate Finishing and Repairing	358
Job Press Department:	
Kelly Presses	555
Victoria and Caxton Presses	254
Universal Presses	784
Gordon Press	81
Cylinder Press Department:	
Pony Press	82
00, 1-Color Presses	552
000, 2 " "	977
0000, 1 " "	1,672
00000, 1 " "	376
00000, 2 " "	519
Webb Press Department:	
64-page, 2-Color Presses	2,034
32 " 2 " "	605
32 " 1 " "	1,289
64 " 1 " "	454

Solution to

DETAILED ANALYSIS OF

	STATIS										
								JOB PRESS DEPT.			
	General	Shipping	Proof Reading	Hand Composition	Keyboard Monotype	Casters	Plate Finishing and Repairing	Kelly	Victoria Caxton	Universal	Gordon
Floor Space in Sq. Ft.			740 1.67%	6817 15.43%	288 .65%	634 1.44%	346 .78%	834 1.89%	417 .94%	1424 3.22%	208 .47%
Horse-power					2	4.37	2.55	5	4	5	1
Horse-power Hours					413 .51	623 .76	456 .56	646 .79	306 .38	375 .46	48 .05
Plant Investment	79,467.92			46,063.04	3,548.00	23,343.81	1,836.94	10,125.94	2,541.89	5,748.07	462.86
Chargeable Hours				6113	413	570	358	555	254	784	81
	DEPARTMENTAL COSTS										
1 Pay-roll - Factory	1,408.02	3,136.06	1,223.06	7,378.29	411.42	427.79	385.02	798.59	286.67	880.50	81.91
2 Office Salaries	2,752.75										
3 Executives' Salaries	4,766.66										
4 Purchases	1,735.81	237.29		332.43	47.65	70.98	8.53	60.03	16.36	59.96	5.19
5 Rent	15.64		50.20	463.84	19.54	39.38	22.47	56.81	28.26	96.79	14.12
6 Power					9.85	14.85	10.88	15.39	7.29	8.94	1.14
7 Depreciation @ 15% Yr.	993.35			575.78	44.35	291.78	22.96	126.57	31.77	71.85	5.79
8 Total	11,672.23	3,373.35	1,273.26	8,750.34	532.81	844.78	449.86	1,057.39	370.35	1,118.04	108.15
9 Distr. of Proof Reading											
10 on Basis of Hrs. @ 17.942¢				1,096.89	74.10	102.27					
11 Total	11,672.23	3,373.35		9,847.23	606.91	947.05	449.86	1,057.39	370.35	1,118.04	108.15
12 Distr. of Gen'l and Ship'g				16.88 %	1.04 %	1.62 %	.77 %	1.81 %	.64 %	1.92 %	.19 %
13 on a Percentage Basis				2,539.69	156.47	243.74	115.85	272.32	96.29	288.87	28.59
14 Total 11 and 13				12,386.92	763.38	1,190.79	565.71	1,329.71	466.64	1,406.91	136.74
Total Labor and Expense per Charg. Hr.				$2.03	$1.85	$2.09	$1.58	$2.40	$1.84	$1.79	$1.69

Problem 104

LABOR AND EXPENSE FOR MAY 19__

TICS														
CYLINDER PRESS DEPT.						WEBB PRESS DEPT.				Cutting	SLIP SHEETING		Wrapping Job	Total
Pony	oo 1-Col.	ooo 2-Col.	oooo 1-Col.	ooooo 1-Col.	ooooo 2-Col.	64 P.P. 2-Col.	32 P.P. 2-Col.	32 P.P. 1-Col.	64 P.P. 1-Col.		Job	Cylinder		
1005 2.27%	3519 7.97%	4019 9.10%	7168 16.3%	2010 4.55%	2010 4.55%	5213 11.80%	1299 2.94%	3896 8.82%	1303 2.95%	1000 2.26%				44,150 100%
2	20	35	48	10	20	80.5	10.25	30.25	20	5.5				
81 .10	1806 2.22	6160 7.57	6096 7.49	1463 1.80	3,880 4.77	33,995-41.82	4,973 6.11	11,020-13.55	8036 9.87	974 1.19				81,351 100%
1,286.92	17,538.60	44,770.30	43,128.96	11,703.37	24,890.25	172,941.58	32,819.03	60,757.62	29,534.41	2,923.42				565,432.93
82	552	977	1,672	376	519	2,034	605	1289	454	354	104	124	354	18,624
PER CHARGEABLE HOUR														
187.34	1,217.69	2,248.05	3,746.76	749.35	1,217.70	9,543.73	2,832.17	6,034.05	2,113.97	371.48	34.15	78.96	116.72	46,909.45
														2,752.75
														4,766.66
23.98	160.82	295.99	493.59	112.64	151.19	1,219.03	287.27	1,299.16	304.00	21.45				6,943.35
68.23	239.58	273.55	489.98	136.77	136.77	354.81	88.28	265.13	88.65	56.20				3,005.00
1.93	43.08	146.94	145.41	34.89	92.55	810.79	118.63	262.87	191.69	23.46				1,940.58
16.09	219.23	559.63	539.11	146.29	311.13	1,536.77	410.24	759.47	369.18	36.54				7,067.88
297.57	1,880.40	3,524.16	5,414.85	1,179.94	1,909.34	13,465.13	3,736.59	8,620.68	3,067.49	509.13	34.15	78.96	116.72	73,385.67
297.57	1,880.40	3,524.16	5,414.85	1,179.94	1,909.34	13,465.13	3,736.59	8,620.68	3,067.49	509.13	34.15	78.96	116.72	73,385.67
.51%	3.22%	6.04%	9.28%	2.02%	3.27%	23.08%	6.40%	14.77%	5.25%	.87%	.06%	.14%	.22%	100%
76.73	484.47	908.75	1,396.23	303.92	491.99	3,472.52	962.91	2,222.23	789.89	130.90	9.03	21.06	33.13	
374.30	2,364.87	4,432.91	6,811.08	1,483.86	2,401.33	16,937.65	4,699.50	10,842.91	3,857.38	640.03	43.18	100.02	149.85	73,385.67
$4.56	$4.28	$4.54	$4.07	$3.95	$4.62	$8.33	$7.77	$8.41	$8.50	$1.81	$.42	$.81	$.42	

Cutting	354
Slip Sheeting—Job Department	104
Slip Sheeting—Cylinder Department	124
Wrapping—Job Department	354
Total	18,624

SCHEDULE 7

DISTRIBUTION OF PROOF-READING DEPARTMENT LABOR AND EXPENSE

The charges to the proof-reading department will be found to amount to $1,273.26 (pay-roll $1,223.06, and rent $50.20), which amount is to be distributed to the hand composition, keyboard monotype, and casters departments on the basis of the chargeable hours in each.

SCHEDULE 8

DISTRIBUTION OF GENERAL AND SHIPPING DEPARTMENT LABOR AND EXPENSE

The total labor and expense will be found to be $73,385.67, of which amount $15,045.58 belongs to the general and shipping departments, and $58,340.09 to productive or operating departments. The $15,045.58 is to be prorated on the basis of the $58,340.09 chargeable directly to departments. Thus it will be found that the hand composition department will be assessed for 16.88 % of the general and shipping departmental labor and expense.

SCHEDULE 9

HOURLY RATES FOR LABOR AND EXPENSE

After the work has been completed up to this stage, it will be found that the $73,385.67 is all segregated according to productive departments. The last stage of the work consists in dividing the chargeable hours given in Schedule 6 into the departmental totals. The result will be the rate per hour for labor and expense for the printer to use in calculating the cost of manufacture.

Points Illustrated in Problem 104

(a) Sold-Hour or Service-Hour Method. See Volume III, Chapter XXII, §§ 2, 9, and 10 for a complete description of the method of combining overhead expense with labor and of apportioning both over the product.

Problems 105 and 106

The following two problems show statements prepared by public accountants covering the operations of two unrelated companies. Each is supplemented by a list of questions which, however, are not answered. It is suggested that these questions be answered by the reader as a means of testing his analytical power and his knowledge of the principles covered by Volumes I to IV.

Problem 105

THE AMERICAN REFINING COMPANY AND ITS CONSTITUENT COMPANIES

CONDENSED GENERAL BALANCE SHEET

December 31, 1920

Assets

Real Estate and Plants, including refineries, warehouses, cooperage, railroads, tank cars, wharves and stables, with their machinery and equipment, and timber and other lands owned in fee or through ownership of the entire capital stock of constituent companies, at cost less depreciation	$ 45,931,123.93
Investments—General	24,782,540.68

Investments—Insurance Fund		9,500,000.00
Investments—Pension Fund		1,750,000.00
Merchandise and Supplies, including raw and refined sugar, syrup, material in process of manufacturing boneblack, cooperage, and other stock and supplies on hand		9,142,074.71
Prepaid Accounts, Insurance, Taxes, etc.		309,051.18
Loans		1,121,266.10
Accounts Receivable		3,322,489.23
Accrued Income, Interest Earned, and Dividends Declared but Not Yet Collected		1,047,043.91
Cash on Hand, with Trust Companies, Banks, and Short-Term Loans		40,493,252.19
		$137,398,841.93

Liabilities

Capital Stock:		
Preferred	$45,000,000.00	
Common	45,000,000.00	$ 90,000,000.00
Sundry Reserves:		
For Insurance	$ 9,500,000.00	
For Pension Fund	1,750,000.00	
For Improvement of Plants	3,367,514.84	
For Trade-Mark Advertising	2,000,000.00	
For Contingencies	823,647.99	17,441,162.83
Accounts, Taxes, and Loans Payable		8,097,115.45
Dividends Declared, payable January 2, 1921, and Former Dividends Unclaimed		1,599,036.75
Surplus, balance, December 31, 1919	$18,348,711.69	
Add—Amount transferred in 1920 as stated in Income and Profit and Loss Statement	1,912,815.21	20,261,526.90
		$137,398,841.93

COMPARATIVE PROFIT AND LOSS STATEMENT

For Years 1918, 1919, and 1920

	1918	1919	1920
Credits			
Profit from Operations	$2,991,465.39	$ 9,756,379.42	$10,055,291.41
Interest on Loans and Deposits	880,609.09	792,990.70	1,006,002.25
Income from Investments	2,312,646.21	2,905,737.10	3,129,948.70
Net Profit from Investments	....	248,336.34	21,544.85
	$6,184,720.69	$13,703,443.56	$14,212,787.21
Amount of Appropriations for Improvement of Plants expended in new construction, and offset in Depreciation on Plant and Equipment below	$ 685,470.76	....	....
Amount deducted from Surplus of former years	701,992.24	....	....
	$7,572,183.69	$13,703,443.56	$14,212,787.21
Debits			
Depreciation, Renewal, and Replacement	$ 790,304.71	$ 2,000,000.00	$ 2,000,000.00
Sundry Reserves	481,906.98	3,383,562.09	4,000,000.00
Dividends Declared	6,299,972.00	6,299,972.00	6,299,972.00
	$7,572,183.69	$11,683,534.09	$12,299,972.00
Amount added to Surplus of former years	....	$ 2,019,909.47	$ 1,912,815.21
	$7,572,183.69	$13,703,443.56	$14,212,787.21

BALANCE SHEET

For Years 1918, 1919 and 1920

	1918	1919	1920
Assets			
Real Estate and Plants	$ 48,763,560.47	$ 47,246,442.89	$ 45,931,123.93
Investments—General	22,577,772.00	23,972,036.34	24,782,540.68
Investments—Insurance Fund	8,000,000.00	9,000,000.00	9,500,000.00
Investments—Pension Fund	1,000,000.00	1,250,000.00	1,750,000.00
Merchandise and Supplies	16,963,384.52	18,654,839.97	9,142,074.71
Prepaid Accounts	252,834.04	1,527,643.32	309,051.18
Loans	3,803,274.90	1,222,193.00	1,121,266.10
Accounts Receivable	4,607,398.09	3,833,259.72	3,322,489.23
Accrued Income	468,844.67	555,907.03	1,047,043.91
Cash	15,624,806.32	22,717,453.53	40,493,252.19
	$122,061,875.01	$129,979,775.80	$137,398,841.93

	1918	1919	1920
Liabilities			
Capital Stock	$ 90,000,000.00	$ 90,000,000.00	$ 90,000,000.00
Sundry Reserves	10,137,705.62	13,475,267.87	17,441,162.83
Accounts and Loans Payable	3,999,462.92	6,555,963.24	8,097,115.45
Dividends Declared and Outstanding	1,595,904.25	1,599,833.00	1,599,036.75
Surplus	16,328,802.22	18,348,711.69	20,261,526.90
	$122,061,875.01	$129,979,775.80	$137,398,841.93

Questions

1. What amount of current assets does the balance sheet show? What is the ratio between current assets and liabilities?
2. (a) Ascertain what dividends were declared by this company payable on January 2, 1921, and after doing so determine the amount of unclaimed dividends.
   (b) How do you explain the item among the assets, "Accrued Income, Interest Earned, and *Dividends Declared but Not Yet Collected*"?
3. After allowing for the dividend paid on the preferred stock during the year, what were the earnings per share on the common stock?
4. What evidences of strength do you observe in the statements of this company?
5. Determine the book value of the common stock.
6. Explain the nature of the reserve for trade-mark advertising. Give the probable function of the account.
7. The reserve for pension fund and the corresponding pension fund have been increased $500,000 during the year. By what entries was this brought about?
8. The report of the company states that the number of stockholders has increased during the year from 18,949 to 19,758 and that the average holdings have decreased from 47½ shares to 45½ shares. Is this change to be regarded in a favorable or an unfavorable light?
9. Explain this quotation from the detailed report: "Betterments have been capitalized to the extent of $866,323.56."

Problem 106

THE B F COMPANY

CONDENSED BALANCE SHEET

December 31, 1919

Assets

Capital Assets:		
Real Estate, Buildings, Plant, Machinery, and Sundry Equipment less Reserve for Depreciation		$12,679,151.72
Patents		583,650.00
Good-Will		57,798,000.00
		$71,060,801.72
Investments in other Companies, etc.		1,197,058.00
Société Française B F—representing the net investment at December 31, 1919		570,987.32
20,587 shares of 7% Cumulative Preferred Stock in Treasury at par		2,058,700.00
Current Assets:		
Inventory of Raw Materials, Partly Manufactured and Finished Stock	$12,614,926.67	
Trade Accounts Receivable after deducting Reserve to cover Doubtful Accounts, Discounts, and Allowances	4,699,938.10	
Other Accounts Receivable	777,266.85	
Bills Receivable	586,274.70	
Cash in Banks and on Hand	723,053.50	19,401,459.82
Deferred Charges to Future Operations:		
Prepaid Insurance, Interest, Taxes, etc.		222,950.01
		$94,511,956.87

Liabilities

Capital Stock:		
600,000 shares Common Stock, $100 each	$60,000,000.00	
300,000 shares of 7% Cumulative Preferred Stock of $100 each	30,000,000.00	$90,000,000.00
(Redeemable in case of dissolution, liquidation, merger, or consolidation at $125 per share)		

Current Liabilities:		
Bills Payable	$ 2,799,736.24	
Accounts Payable	489,031.53	
Sundry Accrued Liabilities	217,206.47	3,505,974.24
Reserve for Contingencies		300,000.00
Surplus:		
Balance at December 31, 1918	$ 806,235.24	
Add—Net Profit for the year ending December 31, 1919, as per annexed statement	2,599,747.39	
	$ 3,405,982.63	
Deduct—Dividends Paid, 7% on Cumulative Preferred Stock for year ending December 31, 1919 ... $2,100,000.00		
1% on Common Stock .. 600,000.00	2,700,000.00	705,982.63
Contingent Liability (Société Française B F)	$ 573,000.00	
Bankers' loans secured by assets of the French company and by the guarantee of the B F Company (a New York corporation)		
		$94,511,956.87

THE B F COMPANY

PROFIT AND LOSS ACCOUNT

For the Year Ending December 31, 1919

Net Sales		$39,509,346.52
Deduct—Manufacturing, Selling, and General Administrative Expenses		36,451,233.98
Profit from Operations		$ 3,058,112.54
Add—Miscellaneous Income		491,316.72
		$ 3,549,429.26
Deduct:		
Reduction of Treasury Preferred Stock from Cost to Par Value	$168,417.03	
Provision for Depreciation	541,358.09	
Interest on Bills Payable	239,906.75	949,681.87
Net Profit carried to Balance Sheet		$ 2,599,747.39

REPORT OF ACCOUNTANTS

February 17, 1920.

To the President and Board of Directors of
The B F Company

Dear Sirs:—

We have examined the books and accounts of the B F Company (a New York corporation) and its Subsidiary Companies for the fiscal year ending December 31, 1919, and certify that the annexed Balance Sheet and relative Profit and Loss account for the period have been correctly prepared therefrom.

We verified the additions to the Plant accounts and satisfied ourselves that they represent legitimate capital charges, that ample provision has been made for depreciation, and that the investments in other companies, etc., are conservatively stated in the Balance Sheet.

We are satisfied that the valuations of the inventories of the raw, part manufactured, and finished goods do not exceed cost, that the crude rubber on hand was valued at cost which was lower than market on December 31, 1919, that full provision has been made for doubtful accounts and bills receivable, that the deferred charges represent expenditures properly chargeable to future operations and that due care has been exercised to include all known liabilities.

And we certify that in our opinion the annexed Balance Sheet is properly drawn up so as to show the true financial position of the Company on December 31, 1919, and that the relative Profit and Loss account for the year ending that date shows the correct results from operations.

X, Y, and Z,
Public Accountants and Auditors

Questions

1. How was the treasury stock preferred acquired? What entry pertaining to this stock was made during the year?

2. What is the ratio between current assets and current liabilities?
3. What, in your opinion, is included under "Other Accounts Receivable" and "Sundry Accrued Liabilities"?
4. Would there appear to be any relation between the amount of good-will and the issue of common stock? What proportion of the total assets is represented by good-will?
5. What is the book value of the common stock?
6. Do you approve of the amount of reserves for depreciation and for doubtful accounts not being shown?
7. Was the dividend paid on the common stock earned during the current year?

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(All references are to pages)