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Students' Department

H. A. Finney

Students' Department

EDITED BY H. A. FINNEY

TURNOVER

Editor, Students' Department:

SIR: From the following figures kindly advise what the turnover for the year was and how you arrive at it:

Inventory, January 1, 1920	$50,000.00
Purchases during the year	150,000.00
	$200,000.00
Inventory, December 31, 1920	60,000.00
Cost of goods sold	$140,000.00
Net sales	$200,000.00

Yours truly,

Greensboro, North Carolina. J. J. L.

There is a good deal of difference of opinion as to the meaning of "turnover" and as to the method of computing it. Some use the term in conjunction with working capital. When so used, turnover means the quotient obtained by dividing the net sales by the working capital. Accountants usually employ the term in relation to merchandise inventories. When so used, turnover means the quotient obtained by dividing the cost of sales by the inventory.

On this point Mr. Montgomery has the following to say: "Uniformity is desirable in accountancy terminology, so the author suggests this definition: The turnover of a merchant or manufacturer represents the number of times his capital in the form of stock-in-trade is reinvested in stock-in-trade during a given period. To ascertain the turnover, take the starting inventory, add the purchases or cost of manufactured goods, and deduct the inventory at the end; divide the total by the starting inventory. The result will be the number of times the capital invested in stock-in-trade has been turned over during the period."

Computed by this method, the turnover asked for in the above letter would be determined as follows:

Inventory, January 1, 1920	$50,000.00
Purchases during the year	150,000.00
Total	$200,000.00
Less inventory, December 31, 1920	60,000.00
Cost of goods sold	$140,000.00

140,000.00 ÷ 50,000.00 = 2.8, the turnover.

This method of determining the turnover does not take into consideration the fact that the opening inventory may not represent the normal or average capital invested in stock-in-trade, because the stock may be grad-

ually increasing or decreasing or because the business may have a seasonal trade and consequently carry varying stocks at different times during the year.

If the stock is gradually increasing or decreasing, a nearer approach to the average investment in inventories may be obtained by using as a divisor the average of the inventories at the beginning and end of the year. Computed by this method, the turnover would be determined as follows:

Cost of sales (as above)	$140,000.00	
Inventory, January 1, 1920		$50,000,00
Inventory, December 31, 1920 ...		60,000.00
Total		$110,000.00
Average		$55,000.00

140,000.00 ÷ 55,000.00 = 2.545, the turnover.

This attempt to ascertain the average investment in stock will be fairly accurate if the inventory is uniform throughout the year or is steadily increasing or decreasing, but it will not be accurate if the sales and consequently the inventories vary materially at different periods of the year, because both opening and closing inventories are taken at the same time during the year. When monthly inventories are taken, it would seem that the inventory at January first as well as the twelve inventories taken at the time of monthly closings should be averaged, and the average should be used as a divisor.

The question naturally arises as to what can be done in case monthly inventories are not taken; and it is suggested, in answer to that question, that the inventories may be approximated by the gross-profit method. The rate of gross profit for the year can be ascertained when the annual statements are prepared, and if conditions have been fairly uniform during the year it can be assumed that the rate for the year has been maintained uniformly through the year. If this assumption is warranted, the approximated inventories will be correct enough for use in determining the average inventory. Of course, in applying the gross-profit method it will be necessary to know the purchases and sales month by month. This information can be obtained from the monthly trial balances.

To illustrate the suggested method, the following statistics will be used:

Inventory at January 1	$42,000.00
Total purchases for the year	331,500.00
Inventory at December 31	59,625.00

Purchases and sales, by months, as follows:

	Purchases	Sales
January	$36,000.00	$45,000.00
February	33,000.00	46,000.00
March	29,000.00	42,000.00
April	23,000.00	37,000.00
May	22,000.00	32,000.00

	Purchases	Sales
June	20,000.00	30,000.00
July	18,000.00	28,000.00
August	22,000.00	23,500.00
September	26,000.00	31,000.00
October	31,000.00	30,000.00
November	39,000.00	35,000.00
December	32,500.00	39,000.00
Total for the year	$331,500.00	$418,500.00

It is obvious that the heavy sales begin toward the end of the year and continue through the beginning of the next year and that buying is heavy at the close of the year in expectation of the coming seasonal sales.

If the turnover is computed by using the opening inventory as a divisor, the calculation is as follows:

Inventory, January 1	$42,000.00
Purchases for the year	331,500.00
Total	$373,500.00
Less inventory, December 31	59,625.00
Cost of goods sold	$313,875.00

313,875.00 ÷ 42,000.00 = 7.47, the number of turnovers.

If the turnover is computed by using the average of the opening and closing inventories as a divisor, the calculation is as follows:

Cost of goods sold (as above)		$313,875.00
Inventory, January 1	$42,000.00	
Inventory, December 31	59,625.00	
Total	$101,625.00	
Average		50,812.50

313,875.00 ÷ 50,812.50 = 6.17, the number of turnovers.

If the inventories are approximated to determine the average investment in stock during the year, the computation is made as follows:

313,875.00 (cost of sales) ÷ 418,500.00 (sales) = 75%.

That is, the cost of goods sold during the year is 75% of the sales; and it is assumed that the cost of goods sold each month is 75% of the sales of the month. Using this rate in applying the gross-profit method, the several inventories are approximated as follows:

				Inventory
Jan. 1	Physical inventory			$42,000.00
Jan. 31	Inventory, January 1	$42,000.00		
	Purchases for January	36,000.00	$78,000.00	
	Less cost of goods sold (75% of 45,000.00)		33,750.00	44,250.00

Feb. 28	Inventory, January 31	44,250.00		
	Purchases for February	33,000.00	77,250.00	
	Less cost of goods sold (75% of 46,000.00)		34,500.00	42,750.00
March 31	Inventory, February 28	42,750.00		
	Purchases for March	29,000.00	71,750.00	
	Less cost of goods sold (75% of 42,000.00)		31,500.00	40,250.00
April 30	Inventory, March 31	40,250.00		
	Purchases for April	23,000.00	63,250.00	
	Less cost of goods sold (75% of 37,000.00)		27,750.00	35,500.00
May 31	Inventory, April 30	35,500.00		
	Purchases for May	22,000.00	57,500.00	
	Less cost of goods sold (75% of 32,000.00)		24,000.00	33,500.00
June 30	Inventory, May 31	33,500.00		
	Purchases for June	20,000.00	53,500.00	
	Less cost of goods sold (75% of 30,000.00)		22,500.00	31,000.00
July 31	Inventory, June 30	31,000.00		
	Purchases for July	18,000.00	49,000.00	
	Less cost of goods sold (75% of 28,000.00)		21,000.00	28,000.00
Aug. 31	Inventory, July 31	28,000.00		
	Purchases for August	22,000.00	50,000.00	
	Less cost of goods sold (75% of 23,500.00)		17,625.00	32,375.00
Sept. 30	Inventory, August 31	32,375.00		
	Purchases for September	26,000.00	58,375.00	
	Less cost of goods sold (75 % of 31,000.00)		23,250.00	35,125.00

Oct. 31	Inventory, September 30	35,125.00		
	Purchases for October	31,000.00	66,125.00	
	Less cost of goods sold (75% of 30,000.00)		22,500.00	43,625.00
Nov. 30	Inventory, October 31	43,625.00		
	Purchases for November	39,000.00	82,625.00	
	Less cost of goods sold (75% of 35,000.00)		26,250.00	56,375.00
Dec. 31	Inventory, November 30	56,375.00		
	Purchases for December	32,500.00	88,875.00	
	Less cost of goods sold (75% of 39,000.00)		29,250.00	
	Inventory (as per physical inventory)			59,625.00

The total of the thirteen inventories is $524,375.00, and the average is $40,336.00.

Then 313,875.00 ÷ 40,336.00 = 7.78, the number of turnovers.

This figure, 7.78, does not differ a great deal from 7.47, the turnover found by using the opening inventory, but the similarity is due to the fact that the business appears to be gradually increasing as indicated by the large inventory at December 31 as compared with the inventory at January 1, and this increase offsets the smaller inventories carried during the middle of the year.

Reserve for Sinking Fund

Editor, Students' Department:

Sir: In the July number of The Journal of Accountancy there appeared an article by Edwin J. Rock on *Redemption and Replacement of Bonded Indebtedness.* In this article, Mr. Rock seems to make a distinction between the paying off of borrowed money and the provision of new capital to take its place. He says (p. 37): "When directors have successfully floated a bond issue they usually have more or less definite ideas as to how it will be paid off, but they seldom give much thought at that time to how the capital supplied through this medium will be replaced at maturity." My understanding has always been that the paying off of borrowed money is, of itself, the replacing of that money or capital.

For example, if $10,000.00 were borrowed to purchase a machine, and five years later that money were returned to the lender, the machine would still be on hand as an addition to capital. To provide an additional replacement fund which would amount to $10,000.00 at the end of five years, beside the fund accumulated to repay the loan, would be making an addition of $20,000.00 to working capital, not $10,000.00.

It may be that I have misinterpreted this article, or that I am on the wrong track myself. I would appreciate it if you would explain this seeming error in a future issue of the Journal.

Yours truly,

Philadelphia, Pennsylvania. H. B.

Mr. Rock's point is, in my opinion, very well taken. To use your own illustration, let us assume that the company which borrows $10,000.00 to purchase a new machine has a working capital of $40,000.00 at the time when it makes the loan. Perhaps it is advisable to call attention to the fact that working capital is the excess of current assets over current liabilities. It can be taken for granted that this $40,000.00 working capital is essential to the proper conduct of the operations of the business—otherwise the machine could be purchased by using cash of the working capital instead of by borrowing. Therefore such plans as are made for the repayment of the loan should take into consideration the fact that the working capital of $40,000.00 should not be depleted by the repayment.

Unless the borrowing company is to provide for the repayment by incurring a new liability when this one matures or by the sale of additional stock, it must meet the obligation from its present working capital or from profits. Let us assume that the profits for the five years of the loan total $25,000.00. If this entire amount is paid out in dividends the loan will have to be paid from the working capital, which is the thing Mr. Rock points out should be avoided. Therefore some provision should be made to prevent paying out all of the profits in dividends.

This object is accomplished by setting up a reserve for sinking fund, with the result that during the five years a total of $10,000.00 is transferred from surplus to a reserve. This reduces the surplus available for dividends to $15,000.00, with the result that the stockholders leave in the business $10,000.00 of their profits. This $10,000.00 left in the business supplies the capital which the company found it necessary to borrow.

The situation may be made clearer by setting up partial balance-sheets. In these balance-sheets the working capital will appear as one amount, although it is of course understood that the working capital is the difference between sundry current assets and sundry current liabilities.

Before the purchase of the machine, the only fact of interest in this discussion is the working capital, which appears as follows:

BALANCE-SHEET

Working capital	$40,000.00

After the purchase of the machine, the condition would be as follows:

Working capital	$40,000.00	Bonds payable	$10,000.00
Machine	10,000.00		

At the end of the five years, after creating a reserve and using $10,000.00 of the cash provided by the profits for the accumulation of a fund and the remainder for dividends, the condition would be:

Working capital	$40,000.00	Bonds payable	$10,000.00
Machine	10,000.00	Reserve for sunking fund	10,000.00
Sinking fund	10,000.00		

After paying the bonds, the condition would be:

Working capital	$40,000.00	Reserve for sinking fund	10,000.00
Machine	10,000.00		

Then, if Mr. Rock's suggestion of issuing a stock dividend were followed, the condition would be:

Working capital	$40,000.00	Additional capital stock.	10,000.00
Machine	10,000.00		

By comparing the first and last balance-sheets it is seen that the net result is an acquisition of machinery offset by an additional stock investment paid for out of profits.

The situation would not be essentially different if the bonds had been gradually retired by the "continual redemption sinking-fund method," as the elimination of the fund and the liability and the retention of profits instead of payment of dividends to the full extent of the profits would leave the company with $40,000.00 working capital and $10,000.00 in the reserve for sinking fund.

Now let us assume that the sinking fund reserve is not created and that all the profits of $25,000.00 are paid out during the five years. Since the profits have all gone into dividends, the sinking fund must have been provided out of the working capital, with the result that the working capital is depleted at the end of five years to $30,000.00 In other words, the company finds that at the end of five years it has cut into its working capital although it borrowed money in the first place because it felt that it would be hazardous to reduce the working capital below $40,000.00

I think that your misunderstanding of the situation arises from a failure to distinguish between a fund and a reserve, as you write: "To provide an additional replacement fund which would amount to $10,000.00 at the end of five years besides the fund accumulated to repay the loan would be making an addition of $20,000.00 to working capital, not $10,000.00."

There are two errors here. In the first place it is not the intention to create a "replacement fund." A fund consists of assets set aside for a specific purpose. What is created is a reserve. Or, to put it in another way, the surplus is divided into two parts: a reserve for sinking fund, which is not available for dividends, and free surplus, which is available for dividends. This division of surplus amounts to a statement of policy on the part of the corporation which may be expressed as follows: "Although we are making $25,000.00 in profits during these five years, we shall use only $15,000.00 of the cash so provided for dividends and shall keep $10,000.00 in the business. Thus we shall pay off our loan from cash provided by profits and shall not have to pay the loan by cutting dangerously into our working capital."

The second error is in the amount of increase which you think will take place in the working capital, as disclosed by the words "would be making an addition of $20,000.00 to the working capital, not $10,000.00." As an actual fact, the procedure recommended by Mr. Rock has no effect whatever in increasing the working capital. It merely prevents decreasing it. The $10,000.00 held out of dividends pays off the loan and thus indirectly purchases the fixed asset, all of which has no bearing on the working capital. If the reserve were not created and the profits were all paid out in dividends, the working capital would be diminished.

The replacement of the capital could be accomplished without setting up a reserve for sinking fund if the directors merely curtailed dividends and left the retained profits as a credit in the surplus account. The reason why the reserve is set up is because the trust indenture requires it in many cases, so that a portion of the profits will be put beyond the control of the directors. This is done to safeguard the bondholders, as the payment of all of the profits in dividends with the consequent establishment of the sinking fund out of working capital might jeopardize the operations and curtail future profits to such an extent that the company would be unable to pay interest charges and meet its sinking-fund contributions.

Lease and Purchase Contract

Editor, Students' Department:

Sir: Will you please give me an opinion on the following proposition?

X, a corporation, covenants with Y, the administrator of an estate, as follows: X leases a building for the term of six years, the rental therefor to be $3,570.00 per annum, payable semi-annually. This amount is exactly 6% of the valuation of this property. X has the privilege of purchasing the building for $59,500.00, payable as follows: $10,000.00 on January 1 of the first year, $4,500.00 on January 1 of the second year, $5,000.00 on January 1 of the third year, $5,000.00 on January 1 of the fourth year, $10,000.00 on January 1 of the fifth year, $10,000.00 on January 1 of the sixth year and $15,000.00 on January 1 of the year following the expiration of the lease.

The rental is to be ratably reduced at 6% per annum on the amount paid on the purchase price in case X exercises his option to purchase.

X exercises his option to purchase and makes a payment of $10,000.00 on January 1 of the first year of the lease. On June 30 he pays $1,485.00, representing the rent for the first six months of the year of the lease less 6% on the $10,000.00 paid on the purchase price as per the above agreement.

How should the concern set up the equity on the building? And should the payments to the lessee be considered as rent or as interest on the unpaid portion of the payments?

In this connection nothing is said in the body of the lease regarding the payments being interest, but they are always referred to as rent, and the title to the property, in accordance with the agreement, does not pass until the final payment of $15,000.00 is made on a specified date. In case any of the payments are defaulted X loses his equity in the property.

It is the writer's personal opinion that the entire purchase price of $59,500.00 should be set up on the assets side of the balance-sheet "short," from which should be deducted the $49,500.00 representing the unpaid portion of the purchase price and the net equity carried out as a part of the permanent asset investment. The so-called rent should in the writer's opinion be classified as interest, inasmuch as it is analogous to interest paid on deferred payments similar to a mortgage. In fact, the only difference between the contract referred to and a mortgage is the fact that title has not passed to the X company.

Yours truly,

Cincinnati, Ohio. J. R. D.

Let me answer your letter by beginning with your statement, "In fact, the only difference between the contract referred to and a mortgage is the fact that title has not passed to the X Company." This seems to me a very essential fact, and it would appear from this fact and the other stipulations in the contract that the conditions are as follows:

> During the six-year term, the X company is leasing property belonging to the estate and is paying rent of $3,570.00 annually.

At various intervals during the term, the X company makes payments to the estate which are to apply on the purchase price.

The estate allows interest on these payments or advances, the net payment by the X company being the difference between the rent incurred and the interest earned.

The company is gradually accumulating an equity under the contract.

In accordance with these facts, it would seem that the X company should charge rent $3,570.00 annually during the period of the lease, while occupying property belonging to the estate. On the other hand, it should credit interest with 6% on the amounts paid to the estate on the contract price. These payments on the principal should be charged to equity in purchase contract, and the equity may be shown in the balance-sheet as follows:

Contract price	xx,xxx.xx	
Less deferred payments	xx,xxx.xx	
Equity		xx,xxx.xx

This method of showing the condition in the balance-sheet may be criticized on the ground that it does not show the liabilities on the liability side of the balance-sheet. This is particularly important in this case because large payments are due at short intervals. For this reason it might be preferable to show the contract as an asset and the deferred payments as a liability, with some statement as to the maturity of the instalments.

Relation of Cash Discount to Interest

Editor, Students' Department:

Sir: We would appreciate it if you would solve the following problem for us:

What would be the percentage per annum on an invoice 2%, 10 days—net 30 days?

This problem has caused several discussions here in our office, and we would appreciate having your opinion on the matter.

Yours truly,

Philadelphia, Pennsylvania. F. D.

I suppose what you mean is: What rate of interest is earned by taking the discounts? Assuming that the invoice is paid on the 10th day and that it would otherwise be paid on the 30th day, 2% is obtained for the use of money for twenty days. On the basis of a year of 360 days, the rate would be 2% x 360/20, or 36%. Of course, this is a discount rate, not an interest rate, since it is deducted and the net amount paid. In other words, the purchaser earns $2.00 discount by the payment of $98.00 To change the discount rate to an interest rate, divide 36% by .98, the result being 36.7+%.

Corporate Reorganization and Consolidation

Editor, Students' Department:

Sir: The "A" oil company was organized in 1921 for the purpose of drilling and developing an oil and gas lease, that it acquired on a drilling contract: i.e., another company owned the lease and entered into a contract with the "A" company, whereby the "A" company was to drill the first well and pay all costs in connection therewith. The "A" company was to receive one-half of the production for its part, the other one-half to go to the company owning the lease.

The "A" company has an authorized capitalization of $50,000.00, of which $40,000.00 was sold. The proceeds from the sale of stock were spent in drilling a dry hole.

The "A" company has increased its capitalization to $250,000.00 for the purpose of further development and to buy production.

In the refinancing it is allowing the present stockholders $50.00 worth of stock for every $100.00 worth of stock they now hold, providing the stockholders purchase an additional $50.00 worth of stock. It is also taking the stock of the "X" company on the same basis. The "X" company holds some leases which have a small production but insufficient to allow a fair return on the investment; but with the "A" company taking over the "X" company it can afford to develop the "X" company's lease and probably will get some good producers. The "X" company has $50,000.00 capital stock outstanding.

If the foregoing is sufficient information, I would appreciate your advising me through the *Students' Department* of THE JOURNAL OF ACCOUNTANCY the proper entries to make on the books of the "A" company and also how it will affect the income tax.

Yours truly,

Oklahoma City, Oklahoma. L. R. G.

On the basis of the information contained in your letter, the A company has spent the entire proceeds of the $40,000.00 stock issue in drilling a dry hole, and its present condition is as follows:

BALANCE-SHEET

Unsubscribed stock	$10,000.00	Capital stock authorized	$50,000.00
Deficit	40,000.00		
	$50,000.00		$50,000.00

The A company now increases its capitalization to $250,000.00 which would be recorded by the following entry:

Unsubscribed stock	$200,000.00	
Capital stock authorized		$200,000.00

The stockholders turn in their stock under the refinancing agreement with the understanding that they shall receive fifty per cent. thereof and shall pay for the remaining fifty per cent. to be issued to them. The following entry records the return of the stock to company A:

Treasury stock	$40,000.00	
Stockholders		$20,000.00
Deficit		20,000.00
The reissue of the stock is recorded as follows:		
Stockholders	20,000.00	
Cash	20,000.00	
Treasury stock		40,000.00

The only way available for determining the value of the stock of the X company acquired by the A company, on the basis of the information in your letter, is to assume that the X company stock is worth $25,000.00—

the par of the A company stock issued for it. The acquisition of the X company stock is recorded as follows:

Investment in stock of X company	$25,000.00	
Unsubscribed stock		$25,000.00

The sale of stock to the stockholders of the X company is then recorded as follows:

Cash	$25,000.00	
Unsubscribed stock		$25,000.00

After the reorganization, the A company's balance-sheet would appear as follows:

BALANCE-SHEET

Unsubscribed stock	$160,000.00	Capital stock authorized.	$250,000.00
Investment in X Co. stock	25,000.00		
Cash	45,000.00		
Deficit	20,000.00		
	$250,000.00		$250,000.00

The *Students' Department* does not answer questions relative to the income tax.

INSTALMENT CONTRACTS

Editor, Students' Department:

SIR: This company builds small houses and sells them on the instalment plan, usually taking a moderate payment down and a first and second mortgage for the balance. Prices, down payments and mortgages vary, but usually the deferred payments are covered by a series of instalments all but the last of which are of equal amount. Purchasers frequently ask how long it will take to pay off both mortgages, and how much the last payment will be. If you can show me how to obtain this information I shall appreciate it.

For example, a small piece of property is sold for $4,500.00, the company receiving a down payment of $1,500.00, a first mortgage for $2,000.00 bearing 5% interest and a second mortgage for $1,000.00 bearing 6%. The purchaser is to pay $300.00 every six months, which is to be applied as follows: first, to pay the semi-annual interest on the $2,000.00 first mortgage; second, to pay the interest on the unpaid balance of the second mortgage; third, to apply on the principal of the second mortgage. After the second mortgage has been paid in full, the payments are to apply on the principal of the first mortgage. The question is: How many payments of $300.00 will be required, and what will be the amount of the final payment if it is made six months after making the last full $300.00 payment?

Very truly,

Chicago, Illinois. E. L. M.

As the semi-annual payments are to be applied first to the interest on the first mortgage, which is $50.00 each six months, $250.00 will remain to apply on the interest and principal of the second mortgage. Therefore,

One thousand dollars (the principal of the second mortgage) is the present value at 3% of an unknown number of semi-annual payments of $250.00 each.

Then \$4.00 (\$1,000.00 ÷ 250) is the present value at 3% of the same unknown number of payments of \$1.00 each.

Looking in a table of present values of annuities at 3%, we find that

3.71709840 is the present value of an annuity of 1 for 4 periods, and
4.57970719 is the present value of an annuity of 1 for 5 periods.

As \$4.00 lies between these two amounts, we know that it will take more than four and less than five payments to cover the second mortgage and interest. Now if four payments of \$1.00 will pay a debt of \$3.71709840 and interest thereon, four payments of \$250.00 each will pay a debt of \$3.7170984 × 250, or \$929.27 and the interest thereon. The balance of the \$1,000.00 second mortgage, or \$70.73, and all of the compound interest for five periods will come out of the fifth payment.

$1.03^5 = 1.159274$, the amount of 1 at the end of five periods after compounding interest at 3%.

Then \$70.73 × 1.159274 = \$82.00, the amount of \$70.73 at compound interest for five periods, or the portion of the fifth payment which must be applied in final settlement of the second mortgage. The fifth payment will therefore be applied as follows:

Total of payment	\$300.00
Less interest on first mortgage	50.00
Balance	\$250.00
Less amount to be applied on second mortgage...	82.00
Amount to be applied on first mortgage	\$168.00

This payment reduces the first mortgage to \$2,000.00—\$168.00, or \$1.832.00. All payments hereafter will apply on the first mortgage. Therefore,

\$1,832.00 is the present value at 2½% of an unknown number of payments of \$300.00 each. Then \$6.10666 (\$1,832.00 ÷ 300) is the present value of the same unknown number of payments of \$1.00 each.

Looking in a table of present values of annuities at 2½%, we find that

5.50812536 is the present value of an annuity of 1 for 6 periods, and
6.34939060 is the present value of an annuity of 1 for 7 periods.

As \$6.10666 lies between these two amounts, we know that it will take more than six and less than seven payments to cover the remainder of the first mortgage and the interest thereon. Now if six payments of \$1.00 each will pay a debt of \$5.50812536 and interest thereon, six payments of \$300.00 each will pay a debt of \$5.50812536 × 300, or \$1,652.44 and interest.

When the full \$300.00 payments began to apply on the first mortgage, there remained a balance (see above) of	\$1,832.00
Six payments of \$300.00 will cover principal (and interest thereon) of	1,652.44
Principal to be paid by seventh payment	179.56

The seventh payment must not only cover the unpaid principal of $179.56, but also the compound interest thereon for seven periods.

$1.025^7 = 1.18868575$.

$\$179.56 \times 1.18868575 = \$213.44$, the final payment.

Hence, there will be 5 + 6 or 11 full payments of $300.00 each and a 12th payment of $213.44. The correctness of the solution is proved as follows:

SCHEDULE OF AMORTIZATION

	Payment	Int. @ 2½% on 1st mtge	Int. @ 3% on 2nd mtge	Balance to apply on principal	First mtge	Second mortgage
					$2,000.00	$1,000.00
First	$300.00	$50.00	$30.00	$220.00		220.00
						780.00
Second	300.00	50.00	23.40	226.60		226.60
						553.40
Third	300.00	50.00	16.60	233.40		233.40
						320.00
Fourth	300.00	50.00	9.60	240.40		240.40
						79.60
Fifth	300.00	50.00	2.39	247.61	168.01	79.60
					1,831.99	0
Sixth	300.00	45.80		254.20	254.20	
					1,577.79	
Seventh	300.00	39.45		260.55	260.55	
					1,317.24	
Eighth	300.00	32.93		267.07	267.07	
					1,050.17	
Ninth	300.00	26.25		273.75	273.75	
					776.42	
Tenth	300.00	19.41		280.59	280.59	
					495.83	
Eleventh	300.00	12.40		287.60	287.60	
					208.23	
Twelfth	213.44	5.21		208.23	208.23	
	$3,513.44	$431.45	$81.99	$3,000.00	0	

Stock Assessments

Editor, Students' Department:

Sir: Will you kindly answer the following through the *Students' Department* of the Journal:

(1) When should an assessment account in the general ledger be closed into the surplus account—that is, should it be closed upon the collection of the assessment, at the end of the company's fiscal year or be carried indefinitely in the ledger and appear upon the financial statement as paid-in surplus?

(2) We are asked to prepare "financial statements" for a company whose stock has been assessed during the past year, and also during preceding years. Should an analysis of surplus be furnished to our client, which will show all the assessments, or should only a statement of surplus for last year be furnished?

It will be observed that if an analysis of surplus is furnished only for the past year it will conceal the assessments of prior years, whereas an analysis of surplus for a considerable length of time would disclose all assessments and profit or losses.

Yours truly,

San Francisco, California. M. L. S.

(1) It is my opinion that the credits arising from assessments should not be passed to the general surplus account, but should be credited to paid-in surplus and appear as such in the balance-sheet.

(2) As the assessments will appear separately in the balance-sheet it will not be necessary to make an analysis of the surplus to bring them to light. Whether or not the analysis should be made for other reasons is another question.

Stockholders' Gift to Corporation

Editor, Students' Department:

Sir: Being a reader of The Journal of Accountancy, I would appreciate your opinion on the following question:

Can a stockholder of a corporation assume, personally, the debt of that corporation which was created by a loss of operations? For instance, to be more explicit, if a corporation has a deficit at a certain period, and, in order to present an attractive balance-sheet to a prospective stockholder, the deficit was automatically changed by means of a journal entry to an accounts receivable stockholder's account, does this balance-sheet show a true condition and will the law uphold the act without proof of consideration?

Yours truly,

Baltimore, Maryland. Student.

Your letter confuses a debt and a deficit, as you really ask two questions: first, What would be the effect if a stockholder assumed one of the debts of the corporation? Second, What would be the effect if an individual allowed a journal entry to be made charging his personal account and crediting the deficit account? In the first case the stockholder agrees to pay a debt of the corporation, while in the second case he does not agree to pay a debt, but does agree to make a donation to the corporation.

While the *Students' Department* is an accounting and not a legal department, I think the answer to your question is quite clear. In either case the stockholder agrees to make a gift. Delivery is a necessary element of a binding gift. Until delivery is made the gift is not binding and can

be revoked at any time unless there has been consideration, in which case, of course, it is not a gift. The mere offer to pay a company's debt or contribute the amount of a company's deficit is purely a gift. Whether or not it could be shown that the stockholder received a consideration if the prospective stockholder invested in the corporation on the strength of the balance-sheet is a question of evidence.

If the stockholder has received a legal consideration, the case is different. If he has assumed a debt, there would be no entries in his account—merely an entry debiting the liability account and crediting deficit or surplus. The corporation would not be primarily liable on the debt, but it would be contingently liable and the contingent liability should be shown in the balance-sheet.

If he has agreed, upon adequate consideration, to contribute an amount equal to the deficit, there should be a charge to his account and a credit to deficit. His account should not be shown among the accounts receivable, however, but as a separate stockholder's account.

A Correction

In the solution of problem 3 on page 149 of the August number, an error was made in copying figures, which requires the following correction. The sentences requiring changes are:

"Common stock should be issued for the remainder of the capital; to A $262,397—$64,540; to B $107,679—$61,000. This will give A $197,857 of common stock and B $46,679."

The sentences should read:

Common stock should be issued for the remainder of the capital; to A $262,397—$112,400; to B $107,679—$61,000. This will give A $149,997 of common stock and B $46,679.

Unrealized Profit and Depreciation

Editor, Students' Department:

Sir: I am in doubt on a question of depreciation and would much appreciate your kindness in giving me some information on the point.

A syndicate purchased an hotel at $35,000, including furniture and equipment, etc. The shareholders claim it is worth $100,000, but they set it up on the books at $60,000, and issued additional shares, in proportion to the amounts subscribed, for the difference between the $35,000 and $60,000.

I was making up a profit-and-loss statement for six months' business and deducted depreciation at the rate of 15% per annum on furniture and equipment, but was told I should not do so, as the furniture and equipment were worth more than shown on the books.

I can not see how it could be considered a true statement of profits for the period unless I took depreciation into consideration.

Yours truly,

Kelowna, B. C. J. R. M.

Assets should be put on the books at their cost, and not at their estimated values. It was entirely wrong to make the write-up to $60,000 and issue additional stock. The dividend was illegal, and the fact that it was paid in stock instead of in cash makes no difference in the liability of the directors. If the company ever becomes insolvent, creditors could require the directors who authorized this distribution of stock to pay in cash an amount necessary to satisfy the claims of creditors, up to the

amount of the stock issue. At least this is the law in the United States and probably also in Canada.

It is also wrong to ignore depreciation. The assets may be worth really more than they are carried for on the books, but that has nothing to do with it. There will come a time when they will be worth less than book value, and this loss should be provided for by periodical charges to profit and loss.

Expenses Confused with Dividends

Editor, Students' Department:

Sir: A prosperous small concern in this city, for whom I have done considerable work, has just closed its fiscal year and the management is somewhat in doubt over a division of the profits. If it is not inconsistent with your rules I would appreciate your answer.

The firm in question is incorporated under the laws of Kentucky, and all the stock is owned by three people, an elderly gentleman, his wife and a son. The son has been managing the business on a moderate salary, but the father told him if he would remain with him last year he was to have a much increased salary and also one-third of the profits.

They are now wondering whether or not this additional pay to the son of one-third of the profits should be charged against profits or if it should be charged into the undivided profits account, and whether or not it would be allowed as additional salary in computing net income for federal taxes.

What they really want to do is to handle it as a dividend to the son (the mother and father to draw no dividend) and still charge it against profits for this year.

I have told them that inasmuch as the business is a corporation I hardly thought a dividend could be issued without being equally divided among the stockholders, and that owing to the son's greatly increased salary for the past year I did not believe the government would allow it as a deductible item as it would only allow additional salary or a bonus up to about 15% of one's regular annual salary.

Yours truly,

Owensboro, Kentucky. W. W. C.

The one-third of the profits can not be a dividend unless the son owns one-third of the stock, and not even then unless a corresponding dividend is paid to the other stockholders. You do not say whether the son owns one-third of the stock, but you do state that the father and mother do not want to take dividends; therefore the payment to the son can not be handled as a dividend.

If the son did not own one-third of the stock at the time he agreed to stay another year for a stipulated salary and one-third of the profits, the share in the profits would unquestionably be interpreted as a bonus. In that event it is an expense and would have to be charged to profit and loss. Whether it would be a deductible item in computing taxable net income is another question, and one upon which this department does not express an opinion.