Bridging Program

INTRODUCTORY FINANCIAL ACCOUNTING REVIEW

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Introduction

Students who register for the Bridging Program are expected to have taken an Introductory Financial Accounting and an Introductory Management Accounting course. The issue we encounter is that for some of you, the Introductory Financial Accounting course may have been taken a long time ago. Because we have to assume that students have a certain amount of financial accounting basics when we start the Bridging Program, some students find the first couple of weeks of the Bridging Program rough. For some students, the first couple of weeks are so overwhelming that they drop out of the program early.

The purpose of this document is to make the first few weeks of the Bridging Program run more smoothly for you. If you read through this document and prepare all of the problems, you will find that you will be much better prepared for the Bridging Program than otherwise you would be. Going through this preparation, as opposed to beginning the program "cold" will make your chances of success in the program that much higher.

Jacques Maurice
Rebecca Renfroe

1. The Accounting Cycle – Income Statement and Balance Sheet

The Accounting Equation

To begin any discussion about accounting, the Accounting Equation is a critical starting point. The key components of the accounting equation are Assets, Liabilities and Shareholders' Equity.

The definition of an asset is a probable future economic benefit obtained or controlled by a particular entity as a result of a past transaction or event. There are three key components to this definition: a) the asset will provide some probable, future benefit to the company, b) the asset is under the control of the company; and, c) the asset has come into the company's control through some past transaction or event. Examples of assets are Cash, Accounts Receivable, Inventory and Capital Assets.

A liabilitiy, on the other hand, is an obligation of an entity arising from past transactions or events, the settlement of which may result in the transfer or use of assets, provision of services or other yielding of economic benefits in the future. Examples of liabilities are accounts payable and accrued liabilities, bank loans and long-term debt.

If you were to liquidate all of the assets of a company and pay off all liabilities with the proceeds, any amount left over would be the Equity in the company. Shareholders' Equity, as it is sometimes called, is a numerical representation of the shareholders' interest in a company.

The Accounting Equation is as follows:

Assets = Liabilities + Shareholders' Equity

The equation must hold true at all times. How we manage this is through balanced entries. That is, each time we record an event within a company's accounting life, if we affect one side of the equation, we must also affect the other, OR we can both increase and decrease the same side of the equation to keep it in balance. Hence, we have our second truth of accounting:

Debits = Credits

The normal balances of the above accounts are as follows:

Assets - Debit
Liabilities - Credit
Shareholders' Equity - Credit

Let's look at a few examples of manipulating the Accounting Equation. Recall the accounting equation:

Assets = Liabilities + Shareholders' Equity

Example

(a) When an owner invests their own cash in starting up a company, this will have two effects. First, the cash account (an asset) will increase, and the Contributed Capital account will also increase. The Contributed Capital account is part of Shareholders' Equity and comprises of all contributions made by the shareholders to the company. Say an owner invests $50,000 of their own money to start a company. The journal entry would be:

Cash	50,000	
Contributed Capital		50,000

The cash account gets debited (dr.) and the Contributed Capital Account gets credited (cr.). Note the convention above:

- when writing journal entries, the account label that gets debited is flush against the left margin and the account label that gets credited is tabbed in;
- the debit dollar amount is in the first column whereby the credit dollar amount is in the second column.

The equation stays in balance as we are increasing both sides of the equation:

Assets	**=**	***Liabilities***	**+**	***Equity***
+ 50,000				+50,000

(b) That same company then uses some of that cash to purchase inventory to resell. That inventory costs $10,000. The journal entry would be:

Inventory	10,000	
Cash		10,000

Note that both of these are asset accounts, but our equation stays balanced because we are increasing one asset (inventory), but decreasing another (cash):

Assets	**=**	***Liabilities***	**+**	***Equity***
+ 10,000				
- 10,000				

(c) That same company then purchases an additional $5,000 worth of inventory on account, that is, they do not pay cash but take on an account payable with the supplier. The journal entry would be:

Inventory	5,000	
Accounts Payable		5,000

We are increasing an asset, and increasing a liability, therefore, our equation holds true:

Assets	**=**	***Liabilities***	**+**	***Equity***
+ 10,000		+10,000		

(d) The company then uses cash to purchase equipment that costs $75,000. The journal entry would be:

Equipment	75,000	
Cash		75,000

Both the Equipment account and the Cash account are assets, therefore, by increasing one and decreasing another the equation holds true:

Assets	**=**	***Liabilities***	**+**	***Equity***
+ 75,000				
- 75,000				

(e) The same company is a little short on cash and has to take out a loan from its bank. The loan is for $100,000. The journal entry to record the loan would be:

Cash	100,000	
Bank Loan		100,000

Upon signing the loan, the company would receive $100,000 cash, therefore, we increase the asset account Cash. Furthermore, they will take on a liability to pay back the bank the $100,000. By increasing both sides of the equation, an asset and a liability, our equation stays in balance:

Assets	**=**	***Liabilities***	**+**	***Equity***
+ 100,000		+100,000		

Transactions that impact the Statement of Income

The above examples used accounts that appear on the Statement of Financial Position. Income Statement accounts will consist of Revenue accounts or Expense accounts. Revenue accounts normally have a credit balance, i.e. when a revenue account is increased we credit the account. Conversely, an expense account's normal balance is a debit balance. All revenue and expense accounts are temporary accounts in the sense that we start the year with a zero balance in the account. At the end of each year, the income and expense accounts are closed out to zero, and the resulting debit or credit is either added or subtracted to an account called Retained Earnings, which is part of the Shareholders' Equity section of the Statement of Financial Position.

If Revenues are greater than Expenses during a period, the company will have generated a net income and a net Credit entry to Retained Earnings will result. If Expenses are greater than Revenues, the company will have generated a net loss and a net Debit balance to Retained Earnings will result.

If you remember that Income and Expense accounts get closed to Retained Earnings (which we will discuss in further detail later) then you can see how recording sales and expenses will still keep the accounting equation in balance. For example, an debit entry to an expense account is viewed as a reduction of Equity and a credit entry to a revenue account is viewed as an increase in Equity, via the Retained Earnings Account.

If we continue with our examples…

(f) Say that the company from the above example has $30,000 in sales in its first month. The journal entry would be:

Cash	30,000	
Sales Revenue		30,000

The accounting equation is maintained since Assets are increased and Equity is increased:

Assets	**=**	***Liabilities***	**+**	***Equity***
+ 30,000				+30,000

(g) To incur these sales, the company sold all $15,000 worth of its inventory. The journal entry to record that would be:

Cost of Goods Sold	15,000	
Inventory		15,000

Note that this entry removes the inventory from the company's accounts, as they no longer have it on hand to sell. Note that Cost of Goods Sold is an expense account. The accounting equation remains in balance:

Assets	**=**	***Liabilities***	**+**	***Equity***
- 15,000				-15,000

The Statement of Financial Position

The Statement of Financial Position is a snapshot of a company's financial position at a particular point in time. The Statement of Financial Position (also called the Balance Sheet) is, basically, an expanded form of the accounting equation:

The Statement of Financial Position

Assets **=** ***Liabilities & Shareholders' Equity***

<table>
<tr><td rowspan="2">Current Assets</td><td>Liabilities

Current Liabilities</td></tr>
<tr><td>Non-Current Liabilities</td></tr>
<tr><td rowspan="2">Non-Current Assets</td><td>Shareholders' Equity

Contributed Capital</td></tr>
<tr><td>Retained Earnings</td></tr>
</table>

Assets are listed from most liquid to least liquid, as are liabilities, and both are divided into current and non-current based on their liquidity. Assets and liabilities that will come due or have to be settled within 12 months or one accounting cycle (whichever is longest) are classified as current, and all other assets and liabilities are classified as non-current.

Note, that in some cases you may have an asset or a liability that is partly current and partly non-current. In this case, you would break out the current portion and classify it as such, and classify the remainder as non-current. The classic example of this is breaking out the current portion of the long-term debt of a company. For example, if your loan balance is $200,000 and the agreement with the bank is that you will be required to pay $50,000 of this balance within the next year, this $50,000 would be classified as a current liability and the remaining $150,000 would be classified as a long-term liability.

Typical accounts you will see on the Statement of Financial Position are:

Current Assets:

Cash – the most liquid of all assets, this account includes all currency and equivalents (bank drafts, money orders etc.).

Accounts Receivable – the account is the sum total of all outstanding invoices which are owed to the company by its customers. Accounts Receivable is normally reported net of an Allowance for Uncollectible Accounts (discussed further in Chapter 3).

Inventory – this account is a listing of all of the items that the company normally sells in its day-to-day activities. The inventory can either be purchased, complete, ready for re-sale, or manufactured by the company itself. A more detailed discussion of this account will take place Chapter 4.

Prepaid Expenses – this account represents amounts that have been paid in cash for expenses that have not been incurred by the company. For example, when we take out an insurance policy, we normally pay the annual premium the day the policy takes effect. Because the policy has not yet expired, the cost of the policy will be classified as a prepaid expense.

Non-current Assets:

Buildings – this account is a listing of all depreciable buildings owned by the company. The associated Accumulated Amortization contra account is normally shown directly below the asset account, and the asset is therefore shown net of accumulated amortization. More on this in Chapter 5.

Equipment – this account is treated in the same manner as the Buildings account, but is a listing of all equipment owned and used by the company.

Land – this account is a listing of all land held by the company. Note that amortization is never taken on land.

Long-term investments – these are investments that are to be held for many years, and includes investments in bonds, stocks, other companies or special funds.

Intangible assets such as patents, trademarks and copyrights would be classified as long-term assets.

Current Liabilities:

Accounts payable – a listing of all accounts that will be due to suppliers which are expected to be repaid within one year or one accounting cycle.

Taxes payable – a listing of all taxes due within one year or one accounting cycle.

Wages payable – a listing of all wages due to employees within one year or one accounting cycle. Note that the wages payable account is normally the result of an adjusting entry.

Non-current liabilities:

Long-term debt including bonds and notes payable – this account is a listing of all debt which the company has incurred which is not due within one year or one accounting cycle. It is *when* the amount is due back to the lender that differentiates between current and non-current debt.

Shareholders' Equity:

Contributed Capital – this account contains any amounts which have been invested in the company by the company's shareholders.

Retained Earnings – this account represents the cumulative total of the net income of a company that has not been distributed to shareholders. The retained earnings account is adjusted at the end of each year to account for a company's net income or loss. The retained earnings account reconciliation from the beginning of year to end of year balance is as follows:

Retained Earnings, beginning balance	XXX
Add Net Income for the year or deduct the Net Loss for the year	± XXX
Less Dividends declared to shareholders	- XXX
Retained Earnings, end of year	XXX

The Income Statement

The income statement is a statement that shows how a company performed during one period, typically the fiscal year of the company. It takes the reader from total Revenues to Net Income, the amount left over after all relevant expenses have been taken into account.

Income statements can take on one of two formats: single step and multi-step. Either one is acceptable under GAAP, however, most companies tend to use some form of a multi-step statement.

The single step statement lists all revenues and then all expenses without breaking out any further subtotals.

For example:

The Miller Company
Income Statement
For the Period ended December 31, 20x8

Sales	$100,000
Interest Income	3,000
Cost of Goods Sold	(60,000)
Operating Expenses	(25,000)
Income Tax Expense	(8,000)
Net Income	$10,000

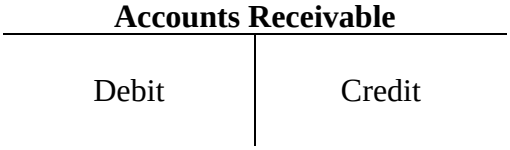
The multi-step statement has multiple subtotals, and for the above company would look like the following:

The Miller Company
Income Statement
For the Period ended December 31, 20x8

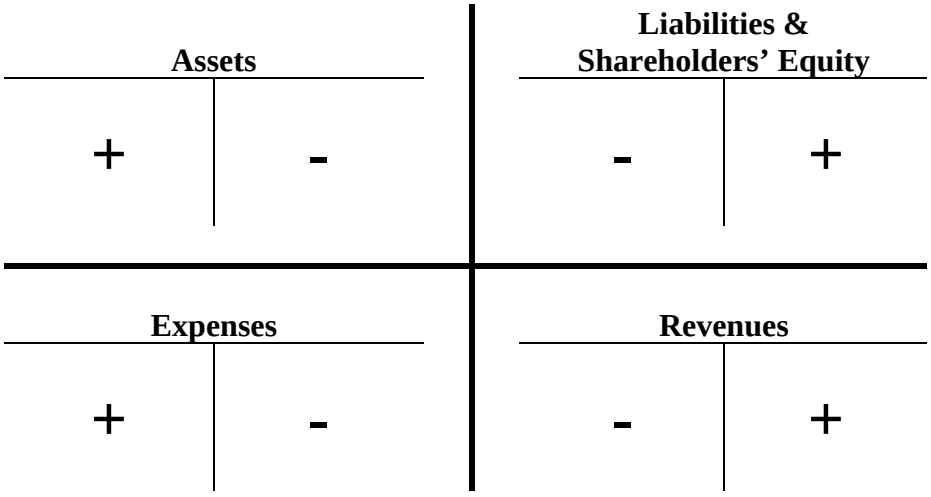
Sales	$100,000
Cost of Goods Sold	(60,000)
Gross Profit	40,000
Operating Expenses	(25,000)
Operating Income	15,000
Interest Income	3,000
Net Income before Taxes	18,000
Income Tax Expense	(8,000)
Net Income	$10,000

The T-Account

Named for its shape, which resembles a capital "T", a T-account is a tool used by accountants to keep track of entries that are made to individual accounts. When an entry is made and an account is to be debited, an entry is placed on the left-hand side of the T. When a credit is made, it is placed on the right hand sand. Thus, for every entry the left-hand entry must equal the right-hand entry in order for the Accounting Equation to hold true.



The following represent how increases and decreases in accounts get recorded:



Comprehensive Example

Ian has worked at a music store for the last 20 years. After years of planning and saving, he has decided he is ready to go out on his own. January 2, 20x7, Ian's Incredible Instruments Inc. Opened for business in a local mall. The following transactions took place during the fiscal year ended December 31, 20x7:

1. Ian invested $175,000, his entire life savings, into the company upon incorporation, January 2, 20x7. He received 1,000 common shares of the Corporation, Ian's Incredible Instruments, Inc..

2. Ian's Incredible Instruments Inc. is located in the Meadowvale Mall. Ian signed a two-year lease with monthly rent of $8,000 due on the first of each month. The lease is in effect from January 2, 20x7 through December 31, 20x8. The lessor required Ian to pay the first and last month's rent on January 2, 20x7.

3. The mall location is suitable for Ian's retail needs, but is not large enough to store any extra inventory. An outside storage facility has been rented to fill this need. Rent is $1,200 per month, beginning February 1, 20x7, and was rented on a month-to-month basis. (Record the February rental payment only.)

4. Inventory of $120,000 was purchased on account.

5. An insurance policy, which covered the period of January 2, 20x7 through December 31, 20x7, was purchased for $5,760 cash.

6. Ian purchased furniture and fixtures for the store at an auction for $30,000. He paid cash.

7. Ian's Incredible Instruments Inc.'s Sales for the first year were as follows: Cash sales - $430,000; Credit sales - $310,000

8. The company took out a loan for $200,000. The terms of the loan, which was taken out on June 1, 20x7, are for 5 years, with 10% annual interest due semi-annually. That is, the annual rate is 10%, however, interest payments are due every 6 months.

9. More inventory was purchased on account June 1, 20x7 for $350,000.

10. A total of $280,000 of the accounts receivable were collected throughout the year.

11. Having proven himself a good tenant, Ian was able to convince his landlord at the mall to give him additional storage space (at no extra cost), and was able to give up his off-site storage facility. He only rented the outside facility to the end of November, 20x7. (Record the payments made from March to November only.)

12. Additional cash disbursements for the year were as follows:

Wages & salaries	$165,000
Rent	88,000
Advertising	40,000
Miscellaneous expenses	23,000
Payments of accounts payable	120,000
Interest on bank loan	10,000
	$446,000

13. The total cost of the inventory sold during the year was $300,000.

14. Ian declared and paid a dividend of $60,000 (note that a dividend is debited against retained earnings).

For each of the above, the appropriate journal entries would look like this:

1. To record Ian's initial investment into the company.

Cash	175,000	
Contributed Capital		175,000

2. To record the payment of first and last month's rent on the lease. We know that the first month's rent will be "used up" in this year, and therefore it is an expense in this fiscal period. However, the deposit for the last month won't be used until 2 years from now. This is what we call a prepaid expense.

Prepaid Rent	8,000	
Rent Expense	8,000	
Cash		16,000

3. To record the rent paid on the outside storage facility in February for <u>one</u> month.

Rent Expense	1,200	
Cash		1,200

4. To record the purchase of inventory on account.

Inventory	120,000	
Accounts Payable		120,000

5. To record purchase and payment of the insurance policy. Note that because it expires December 31, 20x7, the entire amount applies to the current fiscal year and therefore there is no prepaid portion.

Insurance Expense	5,760	
Cash		5,760

6. To record the purchase of furniture and fixtures, for which cash was paid.

Furniture and Fixtures	30,000	
Cash		30,000

7. To record sales for the first year. Note that in reality, sales are recorded individually as they are made. However, for the purposes of this example we will be entering them in one journal entry.

Cash	430,000	
Accounts Receivable	310,000	
Sales		740,000

8. Upon receiving the loan, two things will happen to Ian's Incredible Instruments Inc. First, they will get $200,000 cash from the bank; second, they will have an outstanding loan for the same amount. We will deal with the interest expense incurred on the loan in a separate entry.

Cash	200,000	
Bank Loan		200,000

9. To record the purchase of inventory on account.

Inventory	350,000	
Accounts Payable		350,000

10. To record the collection of accounts receivable throughout the year. Note that as we collect the cash, we must remove the receivable from our books, as they are no longer due to us. Hence, the credit to the Accounts Receivable account.

Cash	280,000	
Accounts Receivable		280,000

11. To record the rental expense incurred from March through November. (Remember, we already recorded the initial payment in February). $1,200/month x 9 months = $10,800.

Rent Expense	10,800	
Cash		10,800

12. To record the various other cash disbursements made throughout the year. Note the following supporting calculations:

Rent Expense – 11 months x $8,000/month = $88,000
Interest on bank loan - $200,000 x (10% x ½ year) = $10,000

Wages & Salaries Expense	165,000	
Rent Expense	88,000	
Advertising Expense	40,000	
Miscellaneous Expenses	23,000	
Accounts Payable	120,000	
Interest Expense	10,000	
Cash		446,000

13. To remove the inventory which was sold from the inventory account and record the resulting Cost of Goods Sold expense.

Cost of Goods Sold	300,000	
Inventory		300,000

14. To record the dividend paid.

Retained Earnings	60,000	
Cash		60,000

The recording of the above journal entries in T-Accounts would be as follows:

Assets | **BALANCE SHEET** | **Liabilities & Equity**

Cash

1	175,000	16,000	**2**
7	430,000	1,200	**3**
8	200,000	5,760	**5**
10	280,000	30,000	**6**
		10,800	**11**
		446,000	**12**
		60,000	**13**
	515,240		

Prepaid Rent

2	8,000		

Accounts Receivable

7	310,000	280,000	**10**
	30,000		

Accounts Payable

12	120,000	120,000	4
		350,000	**9**
		350,000	

Bank Loan

	200,000	**8**

Inventory

4	120,000	300,000	**13**
9	350,000		
	170,000		

Furniture & Fixtures

6	30,000	

Contributed Capital

	175,000	**1**

Retained Earnings

13	60,000	

Expenses | **INCOME STATEMENT** | **Revenues**

Rent

2	8,000	
3	1,200	
11	10,800	
12	88,000	
	108,000	

Insurance

5	5,760	

Sales

	740,000	**7**

Wages & Salaries Expense

12	165,000	

Advertising Expense

12	40,000	

Misc. Expenses

12	23,000	

Interest Expense

12	10,000	

Cost of Goods Sold

13	300,000	

A trial balance of all of the closing balances of the above accounts would look like this:

Ian's Incredible Instruments Inc.
Trial Balance
As at December 31, 20x7

	Debit	*Credit*
Cash	$515,240	
Accounts Receivable	30,000	
Inventory	170,000	
Prepaid Rent	8,000	
Furniture and fixtures	30,000	
Accounts Payable		$350,000
Bank Loan		200,000
Contributed Capital		175,000
Retained earnings	60,000	
Sales		740,000
Cost of Goods Sold	300,000	
Rent Expense	108,000	
Insurance Expense	5,760	
Wages & Salaries Expense	165,000	
Advertising Expense	40,000	
Interest Expense	10,000	
Miscellaneous Expenses	23,000	
	$1,465,000	$1,465,000

A multi-step income statement for Ian's Incredible Instruments Inc. would look like this:

Ian's Incredible Instruments Inc.
Income Statement
for the year ending December 31, 20x7

Sales	$740,000
Cost of Goods Sold	300,000
Gross Profit	440,000
Operating Expenses	
Rent Expense	108,000
Insurance Expense	5,760
Wages & Salaries Expense	165,000
Advertising Expense	40,000
Interest Expense	10,000
Miscellaneous Expenses	23,000
	351,760
Operating income	98,240
Interest Expense	10,000
Net income	$88,240

Closing Accounts

All revenue and expense accounts are closed out to zero at the end of each fiscal period. As such, they are referred to as temporary accounts. At the end of the year, all balances get returned to zero, and the offsetting amount is the net income (or loss) that gets recorded to retained earnings.

The closing entry for Ian's Incredible Instruments is as follows:

Sales	740,000	
Cost of Goods Sold		300,000
Rent Expense		108,000
Insurance Expense		5,760
Wages & Salaries Expense		165,000
Advertising Expense		40,000
Interest Expense		10,000
Miscellaneous Expenses		23,000
Retained Earnings		88,240

The Statement of Retained Earnings outlines the changes in the Retained Earnings account from the beginning of the year balance to the ending balance:

Ian's Incredible Instruments Inc.
Statement of Retained Earnings
for the year ending December 31, 20x7

Retained Earnings, January 1, 20x7	$ 0
Net income	88,240
Dividends	(60,000)
Retained Earnings, December 31, 20x7	$ 28,240

We can now prepare a Statement of Financial Position for Ian's Incredible Instruments:

Ian's Incredible Instruments Inc.
Statement of Financial Position
as at December 31, 20x7

ASSETS	
Current Assets	
Cash	$515,240
Accounts receivable	30,000
Inventory	170,000
Prepaid rent	8,000
	723,240
Furniture and fixtures	30,000
	$753,240
LIABILITIES AND SHAREHOLDERS' EQUITY	
Current liabilities	
Accounts payable	350,000
Long-term liabilities	
Bank loan	200,000
	550,000
Shareholders' Equity	
Contributed Capital	175,000
Retained earnings	28,240
	203,240
	$753,240

Adjusting Entries

Most adjusting entries can be classified in one of two ways:

	Prepayments – Cash is paid out or received before event occurs.	**Accrual** – Event has occurred, but cash has not been paid or received.
Expenses	*Prepaid Expenses* – Cash is paid and an asset is recorded before it is used. The asset will then be allocated to future periods using adjusting entries. Examples: Prepaid rent/insurance, office supplies, plant & equipment	*Accured Expenses* – When an expense has been incurred, but not yet paid in cash, then both the liability and the expense are recorded in the amount relating to the current period. As the liability is paid in future periods, we will Debit the liability and Credit cash to record the payment. Examples: Payroll, Income taxes, Interest Expense, Utilities Expense
Revenues	*Unearned Revenue* – Cash is received and a liabilitiy is recorded. As the company earns the revenue, i.e. performs the service or delivers the goods, an adjusting entry is made to remove the liability and record the revenue. Examples: Rent collected in advance, deposits on orders, subscriptions collected in advance and gift certificates sold.	*Accrued Revenues* – These entries are used then revenue has been earned, but will not be paid in the current period. The adjusting entry sets up an asset, a receivable, and records the revenue. As cash is received in payment in future periods, the receivable is removed. Examples: Credit sales, Rent Revenue, Interest Receivable

Example -

In examples 1-5, assume that the company's year-end is December 31.

1. On August 1, 20x7 you pay $12,000 for an insurance policy that will cover the next 12 months. What would be the journal entry to record the purchase of the policy? What would be the adjusting journal entry at the end of the year?

To record the purchase of the policy:

Prepaid Insurance	12,000	
Cash		12,000

At the end of the year you will have 7 months remaining on the policy. This means that 5 months have been used in the current period, and therefore should be an expense of the current period. The adjusting entry would be:

Insurance Expense	5,000	
Prepaid Insurance		5,000

The balance that remains in the prepaid insurance account of $7,000 represents the portion of the insurance policy that is unexpired, i.e. that will expire in 20x8.

2. On January 1, 20x5 you had $3,800 in your office supplies inventory account. During the year you purchased an additional $13,000 of office supplies. A physical count of the supplies on December 31, 20x5 reveals that you have $5,200 of supplies on hand. What would be the adjusting entry on December 31, 20x5?

To answer this question, it might be helpful to look at the T-Account for Office Supplies for the year:

Supplies Inventory

Opening Balance	$ 3,800		
Purchases	13,000	????	Supplies Expense
Ending Balance	$ 5,200		

As the T-Account shows, we know our opening balance, what was purchased during the year, and what we have left at the end of the year. However, 3,800 + 13,000 does not equal 5,200. The missing piece to the puzzle is the amount of supplies that were used during the year. Therefore, solving the equation, the missing credit or Supplies Expense has to be 11,600.

The adjusting entry on December 31, 20x5 would be:

Supplies Expense	11,600	
Office Supplies		11,600

3. You purchase new office furniture for a cost of $100,000 on January 1, 20x6. You estimate that the furniture will last 10 years and have no salvage value at the end of its useful life. It is now December 31, 20x6. What would be your amortization expense and what would be the adjusting entry to record it?

The cost of the furniture needs to be spread out over its entire useful life. Therefore, instead of taking the full $100,000 as an expense this year, we will take $10,000 per year for the next 10 years, or $10,000 per year for the life of the furniture. Each and every year, the adjusting journal entry would be:

Amortization Expense	10,000	
Accumulated Amortization		10,000

Note that the amortization expense account will appear on the income statement as an operating expense for the year. The Accumulated Amortization account, on the other hand, will appear on the Statement of Financial Position as a reduction of the related asset account, i.e. office furniture in this case. The long-term asset section of the Statement of Financial Position would be as follows:

Office Furniture	$100,000
Less accumulated amortization	(10,000)
	$ 90,000

Because the Accumulated Amortization account is applied as a reduction of the related asset account, we call it a contra account to the Office Furniture account.

4. You own an apartment building and have a tenant whose parents have paid their rent for the entire year in advance. The apartment rents for $800/month. You received payment for the full year on May 1, 20x8. It is now December 31, 20x8. What is your adjusting entry?

On May 1, 20x8, when you received the revenue, you would have recorded an entry of:

Cash ($800 x 12)	9,600	
Unearned Rental Revenue		9,600

As of December 31, you would have earned 8 of the 12 months of revenue. Therefore, the revenue to be recorded for the year would be 8 months x $800/month = $6,400. Furthermore, there would still be 4 months of unearned

revenue left. The balance in the Unearned Rental Revenue Account would have 4 months x $800/month = $3,200.

The adjusting entry on December 31, 20x8 would be:

Unearned Rental Revenue	6,400	
Rental Revenue		6,400

According to the journal entries above, the balance in the Unearned Rental Revenue account will be equal to $9,600 – 6,400 = $3,200. This reconciles to our calculation above.

5. On August 1, 20x3 you take out a loan for $100,000. The loan agreement states that interest will be charged at a rate of 8% annually, and interest and the principal will be due August 1, 20x4. It is December 31, 20x3. What is your adjusting entry to record interest expense for the year?

Looking at the terms of the loan, we can calculate that the annual interest on the loan will be equal to $100,000 x 8% = $8,000. However, as of December 31, 20x3, the loan has not been outstanding for the full 12 months, and furthermore, no cash has been paid for the interest expense.

The loan has been outstanding for 5 months, and therefore, only 5 months of interest pertain to the current period. That is, interest expense for 20x3 would be $8,000 x 5/12 = $3,333. The adjusting entry would be:

Interest Expense	3,333	
Interest Payable		3,333

6. You last paid your employees on March 27, 20x6 (a Monday). Your average weekly payroll is $80,000/week. It is March 31 (Friday), your year-end. What is the adjusting entry?

To calculate the adjusting entry, we have to first figure out how much needs to be accrued; that is, how much do we owe to our employees for the 4 days that we haven't paid them?

If the average weekly payroll is $80,000, and our employees work 5 days a week, then our daily payroll rate can be calculated as $80,000/5 = $16,000. Our employees worked 4 days from the time of their last payday until the end of the year, therefore, the accrued wages payable will be $16,000 x 4 days = $64,000. The adjusting entry would be:

Wages Expense	64,000	
Wages Payable		64,000

Note that this adjusting entry does two things: First, it gets onto our books the liability that we owe to our employees; second, it gets onto our books the expense that we have incurred during the last 4 days of the period. Just because you don't pay cash for something does not mean that the expense wasn't incurred. We MUST record all expenses relevant to the current period, whether we have paid for them or not.

Revenue Recognition and the Matching Principle

For a firm to recognize revenue, the following criteria must be met (with regards to the amount of revenue that is to be recognized):

- the amount of revenue must be determinable,
- the revenue must be earned (all significant acts must be completed),
- collectibility is reasonably assured, and
- all associated costs can be estimated.

For most sales, the revenue recognition point takes place when the transaction takes place. If the goods are shipped to the customer under the terms FOB[1] Shipping, then the goods belong to the customer the minute they are loaded on the truck and revenue can be recognized immediately. If the goods are shipped under the terms FOB Destination, then they belong to the customer only when they are delivered and therefore the revenue recognition point is when the goods are shipped. This can become an issue for goods that are in transit around the company's year-end.

The matching principle is related to the revenue recognition principle and states that all costs incurred to earn the revenue recognized must be recorded at the same time as the related revenues. In the case of a simple sale, this means that the cost of the goods sold become an expense the day the sale is made. However, this can get complicated when say, a 5-year warranty is provided with the product. In this case, as we will see later, the company must estimate the total warranty expense that will be expended on this product and accrue the full amount in the year of sale.

Sales and Sales Contra Accounts

Whenever a sale is made, we credit the Sales account. But, the following transactions are related:

- Sales Returns: whenever customers return merchandise for refund, instead of debiting the sales account, we debit an account called 'sales returns'. This allows the company to keep track of all sales returns separately from the original sale.
- Sales Discounts: if early payment discounts are offered to customers, whenever the discount is taken, then the amount of the discount gets debited to the Sales Discounts account. For example, assume that we make a sale of $1,000 and we offer a discount of 2% if the invoice is paid within 10 days. If the customer pays

[1] FOB stands for 'Free on Board'

within 10 days, they will pay us $980. The $20 discount will get debited to the Sales Discount account.

- Sales Allowances are when merchandise is sold to a customer which is slightly defective. A credit is granted to the customer, but the customer keeps the merchandise.

These three accounts are considered contra accounts to the Sales account and, when reported on the income statements, would be netted out against the Sales account.

Sales	
	Normal credit Balance

Sales returns	
Early payment discounts	

Sales Discounts	
Merchandise returned	

Sales Allowances	
Customer keeps merchandise but is given a discount	

Example – Assume the following transactions.

- merchandise is shipped FOB Shipping to a customer. The selling price is $40,000. Terms of payment are 2/10, n30, that is, a 2 % discount is offered if payment is made within 10 days, otherwise the full amount is payable in 30 days.

Accounts receivable	$40,000	
Sales		$40,000

- merchandise whose sales price was $1,500 is returned to the company

Sales returns	1,500	
Accounts receivable		1,500

- some of the merchandise was slightly damaged during before it was shipped. A credit of $2,500 is granted to the customer.

Sales Allowances	2,500	
Accounts Receivable		2,500

- on the 9th day after the sale, payment of $35,280 is received.

Cash	35,280	
Sales discounts	720	
Accounts receivable		36,000

Problems with Solutions

Problem 1-1

On July 2, 20x2, you decided to start up a new business – Heavenly Books Inc., an off-campus bookstore where students can purchase textbooks and supplies at reduced prices. The following are summary transactions for the period July 2, 20x2 to October 31, 20x2, the company's year end.

1. You and several other shareholders invested $20,000 in return for shares in the company.

2. A suitable location is found and rent is $1,000 per month. The first and last month's rent are due upon signing of the lease on July 2, 20x2. The lease agreement is for one year. In addition to the monthly rent, an annual charge equal to 1% of sales is due at the end of the year (i.e. on June 30, 20x3).

3. Furniture and fixtures are purchased at a cost of $15,000. These are purchased for cash.

4. A bank loan in the amount of $20,000 was obtained on August 1, 20x2. Interest payments are due on the 1st of each month. The annual interest rate is 9%. The loan agreement calls for repayments of $4,000 every 4 months with the first payment due November 1, 20x2.

5. Books and supplies of $50,000 was purchased on account.

6. An insurance policy was purchased for $1,200 cash. The policy takes effect on July 2, 20x2 and expires on June 30, 20x3.

7. Sales for the period ended October 31, 20x2 were:
   Cash sales - $190,000
   Sales on account - $6,000

8. A total of $4,000 of the sales made on account were collected.

9. An additional $120,000 of inventory was purchased on account.

10. Additional cash disbursements for the year were as follows:

Wages and salaries	$36,000
Rent	3,000
Advertising	2,000
Miscellaneous expenses	1,500
Dividends to shareholders	10,000
Interest on bank loan	300
Payments on account re: purchases of inventory	130,000
	$182,800

The following adjustments at year end must be made:

11. The furniture and fixtures are expected to last a total of 20 years with no salvage value. The straight line method is to be used.

12. The adjustment for insurance expense.

13. The interest payable on the bank loan. Credit Accrued Liabilities.

14. An inventory count shows that a total of $25,000 of inventory is on hand.

15. Books costing $15,000 were returned to the publishers.

16. Invoices received but not yet paid amount to $700 for miscellaneous expenses. Credit Accrued Liabilities.

17. Employees are owed a total of $600. Credit Accrued Liabilities.

18. Adjustment for rent payable.

19. The expected income tax rate is 30%. Credit Accrued Liabilities.

Required –

a. Enter all the above transactions in T-Accounts.
b. Prepare a trial balance
c. Prepare the following statements:
   - Income Statement
   - Statement of Retained Earnings
   - Statement of Financial Position

Problem 1-2

On January 1, 20x6, Global Production, Inc., was started with $50,000 invested by the owners as capital stock. On December 31, 20x6, the accounting records contained the following selected amounts:

Accounts payable	$ 7,100
Accounts receivable	14,900
Accumulated amortization – Office Equipment	?
Bank loan, due December 31, 20x8	40,000
Cash	25,100
Capital stock	50,000
Cost of goods sold	84,000
Amortization expense	4,800
Dividends declared	2,100
Interest expense	3,600
Income tax expense	4,100
Insurance expense	2,300
Inventory	44,200
Income taxes payable	1,000
Office equipment	24,000
Prepaid insurance	1,100
Rent expense	21,300
Salary expense	18,000
Salaries payable	1,500
Sales	157,600
Sales returns	2,400
Supplies	2,500
Supplies expense	4,100
Telephone expense	3,500

Required –

Prepare the following for the year ended/as at December 31, 20x6:

a. A multi-step income statement.
b. A statement of retained earnings.
c. A statement of financial position.

Problem 1-3

For each of the following isolated situations, prepare the appropriate adjusting entry.

a) On June 1, you bought a piece of machinery for $50,000. The estimated useful life of the machine is 8 years, with no salvage value estimated at that time. It is now December 31, your year-end. Record the adjusting entry for amortization for the year.

b) You sell subscriptions to your magazine, Kittens Quarterly, on a yearly basis for the fee of $24/year. Issues come out in March, June, September and December. A new customer purchases a subscription in January. It is now April 30, your year-end. First, record the journal entry to record the receipt of the subscription fee in January, and then record the adjusting entry for the end of April.

c) You are a consultant, and you have provided your services Big Al's Used Cars for the past month. Today is the end of the accounting period, but you will not be billing Big Al until next month. You have provided $2,300 worth of services. What would the adjusting entry be?

d) You pay weekly salaries to your staff and your accounting period end falls on a Wednesday. Your daily salary expense is $600. What adjusting entry must be recorded to account for the unpaid salaries?

e) You paid $5,000 for your annual property insurance policy eight months ago. It is now your year-end. What is the appropriate adjusting entry?

f) You have a contract to provide catering services for a local company, INC Inc., for their monthly staff meetings. The contract, which was signed June 1, stated that they would pay you $6,000 on June 1st and again on December 1st for providing these services for one year. What is the adjusting entry required if your year-end is December 31st?

g) Your company is moving into a new office on July 1st. Your year-end is June 30th. Part of your new lease agreement required you to pay your first month's rent, $4,750, ahead of time. You signed the agreement and wrote the cheque on June 30th. What would be the entry to record this? What would be the entry you would make on July 31st to record rent for the month?

Problem 1-4

Below are four transactions that were completed during 20x5 by Doby Company. The annual accounting period ends on December 31. Each transaction will require an adjusting entry at December 31, 20x5. You are to provide the 20x5 adjusting entries required for Doby Company.

a. On July 1, 20x5, Doby Company paid for a two-year insurance premium for a policy on its equipment. Coverage of the insurance policy starts on July 1, 20x5. This transaction was recorded as follows:

Jul 1, 20x5	Prepaid Insurance	$1,000	
	Cash		$1,000

b. On December 31, 20x5 a tenant renting some office space from Doby Company had not paid the rent of $500 for December.

c. On September 1, 20x5, Doby Company borrowed $3,000 cash and gave a one-year, 10 percent, note payable. The total interest of $300 is payable on the due date, August 31, 20x6. The note was recorded as follows:

Sep 1, 20x5	Cash	$3,000	
	Note payable		$3,000

d. Assume Doby Company publishes a monthly magazine. On October 1, 20x5, the company collected $440 for subscriptions two years in advance. The subscription start on October 1, 20x5. The $440 collection was recorded as follows:

Oct 1, 20x5	Cash	$440	
	Unearned subscription revenues		$440

2. Cash

For accounting purposes, cash generally means any cash on hand, bank accounts, petty cash and any foreign currency on hand.

Typically, every 30 days a company will receive a bank statement from the bank. The bank statement is a running total of all transactions that were made in the account since the last bank statement was produced. It starts with the opening bank balance and ends with the ending balance. Accompanying the bank statement are all the cheques that have cleared the bank account. The balance showing on the bank statement needs to be reconciled to the balance shown in the company's cash account. This process is as follows:

1. Ensure that all cheques returned correspond to the amount entered into the cash account,
2. Prepare a list of cheques that were written but that have not yet cleared the bank account (outstanding cheques),
3. Identify any transactions that appear on the bank statement that have not been recorded in the cash account. For example, bank service charges, cheques deposited that are returned due to insufficient funds (NSF cheques), etc.. Prepare journal entries to record these items and post to the general ledger,
4. Compare all deposits recorded on the bank statement to those recorded in the cash account, and
5. Prepare a list of deposits that were made in the cash account but were not yet recorded on the bank statement (outstanding deposits).

The bank reconciliation starts with the balance per the bank statement, adds the outstanding deposits and deducts the outstanding cheques to arrive at the balance per books:

Balance per bank statement	$XXX
Add outstanding deposits	XXX
Less outstanding cheques	-XXX
Balance per books	$XXX

Example – The Parkes Company's bank statement dated Aug 31, 20x7 shows the following:

- ending balance of $45,673
- bank service charges not yet recorded by the company of $156
- returned cheque (NSF) from a customer in the amount of $788
- cheque # 345 was written for $323 and cleared the back for that amount. The cheque was incorrectly written in the cash disbursement journal as $332. The correct amount is $323.
- the total outstanding cheques amount to $6,574
- a deposit made on August 31 in the amount of $3,545 was not recorded on the bank statement
- the general ledger cash account shows a balance of $43,579 (before any adjustments above)

The first thing we do is make adjustments to the cash account for items on the bank statement that have not yet been recorded:

Bank service charges	$156	
Cash		$156
To record the bank service charges for the month of August.		
Accounts receivable	788	
Cash		788
To record the returned cheque.		
Cash ($332 – 323)	9	
Accounts payable		9
To record the error in recording cheque # 345.		

The next step will be to calculate the revised cash balance:

Cash balance, before adjustments	$43,579
Less bank service charges	(156)
Less NSF Cheque	(788)
Add error on cheque # 345	9
Cash balance after adjustments	$42,644

Finally, we prepare the bank reconciliation:

Cash per bank, August 31, 20x7	$45,673
Add outstanding deposits	3,545
Less outstanding cheques	(6,574)
Cash per books, August 31, 20x7	$42,644

Problem with Solution

Problem 2-1

The following information for the month of December 20x6, with respect to cash activities, was gathered by Sarg Ltd.'s bookkeeper.

Cash balance per books, December 1	$ 3,700
Cash received during December	77,000
Cash payments made during December	77,548
Cash balance per bank statement, December 31	6,300
Cheques outstanding, December 31	5,300
Bank service charges for December	52
Deposits in transit at December 31	1,700
Cheque issued by Sparg Ltd. deducted from Sarg's account in error by the bank	580
A $1,200 cheque received from a customer on December 13 in payment of an account receivable was incorrectly recorded as	1,020

Required -

a. Prepare the December 20x6 bank reconciliation for Sarg.
b. Prepare any adjusting journal entries that would result from the December 2006 bank reconciliation.

3. Accounts Receivable

Whenever credit is extended to customers for the provision of goods or services, an account receivable is created. Accounts receivable are, therefore, the aggregate of the unpaid invoices at any point in time. Accounts receivable are reported on the statement of financial position at their net realizable value (NRV), which is equal to the net amount of outstanding invoices the firm expects to recover. The net realizable value is equal to:

Gross Accounts Receivable
Less Allowance for Doubtful Accounts

Calculating the Allowance for Doubtful Accounts

The allowance for doubtful accounts normally has a credit balance and is equal to the amount of accounts receivable that are expected to not be collected. There are two approaches to calculating the allowance for doubtful accounts: the balance sheet approach, where the allowance for doubtful accounts is estimated directly, and the income statement approach, whereby we estimate the amount of bad debt expense on the income statement.

There are generally three approaches to estimating the allowance for doubtful accounts directly (balance sheet approach):

1. Aging of the accounts receivable listing

This involves grouping all outstanding receivables based on how long these have been outstanding. For example, assume the total receivables add up to $1,200,000 and that the aging of accounts receivable is as follows:

0 – 30 days	$750,000
31 – 60 days	280,000
61 – 90 days	120,000
90 + days	50,000
	$1,200,000

Based on past experience, the company estimates that 1% of current accounts will eventually become uncollectible, 3% of accounts between 31-60 days, 8% of accounts between 61-90 days and 40% of accounts over 90 days. The allowance for doubtful accounts at the end of the year will be:

0 – 30 days	$750,000 x 1%	$ 7,500
31 – 60 days	280,000 x 3%	8,400
61 – 90 days	120,000 x 8%	9,600
90 + days	50,000 x 40%	20,000
		$45,500

2. As a percentage of the ending accounts receivable balance

This approach simply takes then ending accounts receivable balance and multiplies it by a percentage. For example, if the ending accounts receivable balance is $1,200,000 and the company estimates that 5% of these accounts will eventually become uncollectible, then the allowance for doubtful accounts at the end of the year will be $1,200,000 x 5% = $60,000.

3. Specific account identification

When a company has accounts receivable from a limited number of customers and has an intimate knowledge of these customers, it may be able to identify which specific accounts may become uncollectible. The sum of the estimated uncollectible accounts at any point in time will form the allowance for doubtful accounts.

The income statement approach is used whenever a company offers their customers revolving credit facilities (i.e. a department store which offers their customers a credit card). In this case, it would not be meaningful to age the accounts receivable listing, so we estimate the bad debt expense as a percentage of credit sales. Note that this approach does not estimate the allowance for doubtful accounts, but estimates the amount of bad debt expense.

The journal entry to record bad debt expense under either the balance sheet or income statement approaches is:

Dr. Bad Debt Expense
    Cr. Allowance for Doubtful Accounts

Recording accounts written off

An account will generally be written off when (1) you receive a notice from a Trustee in Bankruptcy that you will receive an amount that is less than the amount owed, or (2) the amount is small and the cost of recovering the account is greater than the balance owed. Any accounts written off are written off against the allowance for doubtful accounts:

Dr. Allowance for Doubtful Accounts
    Cr. Accounts Receivable

Recording recoveries of accounts written off

When an account that was previously written off is subsequently recovered, we first reverse the journal entry made to write off the account:

Dr. Accounts Receivable
    Cr. Allowance for Doubtful Accounts

We then record the collection on the recovered accounts receivable:

Dr. Cash
Cr. Accounts Receivable

Example – The Jasmine Company's accounts receivable at the end of the year totaled $2,800,000. The balance in the allowance for doubtful accounts at the beginning of the year was $50,000. During the year, the following transactions took place:

- accounts totaling $75,000 were written off,
- previously written off accounts totaling $10,000 were recovered.

The journal entry to record the accounts written off will be:

Allowance for doubtful accounts	$75,000	
Accounts receivable		$75,000

The journal entry to record the recovery will first be to reverse the entry initially made when these accounts were written off:

Accounts receivable	$10,000	
Allowance for doubtful accounts		$10,000

We then record the cash receipt on the accounts receivable:

Cash	$10,000	
Accounts Receivable		$10,000

This will result in a $15,000 **debit** balance in the Allowance for Doubtful Accounts:

Allowance for Doubtful Accounts

Write-offs	$75,000	$50,000	Beginning Bal
		10,000	Recoveries
	$15,000		Ending balance before adjustment

In order to calculate the bad debt expense for the year, we will assume four independent scenarios:

1. The accounts receivable aging is as follows:

	Accounts Receivable	*Estimated % Uncollectible*
0 – 30 days	1,800,000	1.5%
31 – 60 days	600,000	2.5%
61 – 90 days	250,000	6.0%
90 + days	150,000	15.0%
	$2,800,000	

The allowance for doubtful accounts is estimated to be:

(1,800,000 x 1.5%) + (600,000 x 2.5%) + (250,000 x 6.0%) + (150,000 x 15.0%) = $79,500

The bad debt expense will be $94,500 since this is the entry required in the Allowance for Doubtful Accounts account to bring the account to a credit balance of $79,500:

Bad Debt Expense	$95,500	
Allowance for Doubtful Accounts		$95,500

2. Management estimates that 2.75% of the accounts receivable balance will be uncollectible. The allowance for doubtful account should be established at $2,800,000 x 2.75% = $77,000. The journal entry to record bad debt expense will be:

Bad Debt Expense	$92,000	
Allowance for Doubtful Accounts		$92,000

3. Using specific identification of accounts, management estimates that the allowance for doubtful accounts should be $68,000. The journal entry to record bad debt expense will be:

Bad Debt Expense	$83,000	
Allowance for Doubtful Accounts		$83,000

4. Management estimates that bad debt expense will be equal to 1.5% of total credit sales. Total credit sales for the year amounted to $6,000,000. Bad debt expense will then be equal to $6,000,000 x 1.5% = $90,000. The journal entry to record bad debt expense will be:

Bad Debt Expense	$90,000	
Allowance for Doubtful Accounts		$90,000

This will cause the allowance for doubtful accounts to have a credit balance of $15,000 dr. + $90,000 cr. = $75,000.

Note that when using this approach, we are effectively estimating the bad debt expense for the year and the residual becomes the Allowance for Doubtful Accounts. In approaches 1-3, we were estimating the Allowance for Doubtful Accounts with the residual being bad debt expense.

Problems with Solutions

Problem 3-1

The following information relates to Merit Ltd. for the year ended December 31, 2004:

Total sales	$ 15,000,000
Cash sales	800,000
Credit sales	14,200,000
Cash collections from credit customers	11,900,000
Actual accounts receivable determined to be uncollectible and written off during the year	55,000
Recoveries of previously written off accounts receivable	3,000
Accounts receivable, January 1, 2004	1,000,000 dr.
Allowance for doubtful accounts, January 1, 2004	63,000 cr.

Required –

e. Provide the journal entry to write off actual accounts receivable determined to be uncollectible and recoveries, assuming the allowance method is used to account for uncollectible accounts.
e. Provide the December 31, 2004 adjusting journal entry to record bad debts, assuming the allowance method is used and uncollectible accounts are estimated to be ½ of 1% of credit sales.
e. Provide the December 31, 2004 adjusting journal entry to record bad debts, assuming the allowance method is used and management estimates the allowance to be 3% of the closing Accounts Receivable balance.

Problem 3-2

Sigma Company began operations on January 1, 20x0. The Sigma Company calculates its allowance for doubtful accounts by aging the accounts receivable based on the following percentages:

Days Past Invoice Date	***Percent Estimated To be Uncollectible***
0 – 30	1%
31 – 60	5%
61 – 90	20%
Over 90	80%

The following additional information relates to the years ended December 31, 20x1 and 20x0:

	20x1	***20x0***
Credit Sales	$3,000,000	$2,800,000
Collections (excluding recoveries)	2,915,000	2,400,000
Accounts written off	27,000	16,000
Recovery of accounts previously written off	7,000	-
Days Past Invoice at December 31 -		
0 – 30	277,000	234,000
31 – 60	80,000	90,000
61 – 90	60,000	45,000
Over 90	25,000	15,000

Required –

Prepare all journal entries to record the above transactions

4. Inventory

A key part of determining the cost of the items that a company sells to its customers, as well as valuing the items that it has on hand to resell at any point in time, is the inventory system that it chooses. We will begin by looking at two fundamentally different types of systems, and then evaluate the different valuation methods a company can chose to determine the cost of inventory.

The Perpetual Inventory System

The term perpetual means continuing without interruptions, or never ending. When we talk about a perpetual inventory system, we mean an inventory system that has no interruptions. What that means is that inventory is tracked constantly in a real-time basis.

Each item that is purchased for resale gets debited to the inventory account. Furthermore, each time an item is sold is removed directly from the inventory account by crediting the inventory account and debiting the Cost of Goods Sold account.

From time to time, a physical count of inventory will be taken to ensure accuracy of the perpetual records, and any adjustments that are needed will be made to the inventory account.

Example: It is Little Company's first year of business. On the first day, Little Company purchases $5,000 worth of inventory, paying cash. The journal entry would be:

Inventory	5,000	
Cash		5,000

The next day, Little Company purchases an additional $10,000 of inventory, this time on account.

Inventory	10,000	
Accounts Payable		10,000

Note that even though we are not paying cash, the effect on the inventory account is the same as the above journal entry. We still increase the inventory account by the amount of the purchase; we just create a payable instead of reducing our cash account.

After two weeks of business, Little Company makes its first big sale. They sell $4,000 worth of inventory to a customer for $6,000 cash. Note that unless a company is offering a discount to get rid of inventory or for some other reason, the amount the company generally receives from its customer should always be greater than the value of the inventory.

To record the sale, the journal entry would be:

Cash	6,000	
Sales Revenue		6,000

At this point, we have recorded the sale and the receipt of cash; however, we have not removed the items that were sold from our inventory account. To do this, the journal entry would be:

Cost of Goods Sold	4,000	
Inventory		4,000

This journal entry does two very important things. First, it removes the $4,000 worth of inventory from our Inventory Asset account. Second, it records the expense of the items that were sold. This expense account, Cost of Goods Sold (COGS), is used to keep track of all of the costs of all of the items a company sells in one period.

Under the Perpetual system the COGS is a running total, as is the inventory account. This varies significantly from the Periodic Inventory System, which we will now turn our attention to.

The Periodic Inventory System

Under the Periodic Inventory System, we do not keep a "running total" of inventory, nor do we keep a running total of COGS. Instead, we do a physical count of inventory at the end of the year to determine the amount to include on the Statement of Financial Position under "Inventory". So what do we do with the purchases of inventory we make throughout the year?

Throughout the year, as purchases are made of inventory they are tracked in a temporary account called "Purchases". Continuing with the example above, that first purchase of inventory for $5,000 cash would be recorded, under a periodic inventory system, as:

Purchases	5,000	
Cash		5,000

The Purchases account keeps a running total for the year of all purchases of inventory made. However, Purchases has several contra accounts that track other expenses or discounts that may be associated with the purchases. These are:

Purchases	
Normal debit balance	

Transportation – In	
Freight charges	

Purchase Discounts	
	Early payment discounts

Purchase Returns	
	Merchandise returned

Purchase Allowances	
	We keep merchandise but are given a credit

Running totals are kept in each of the above accounts for the year. At the end of the year, the Purchase account and all contra accounts are closed out to zero. At the same time, the inventory account is adjusted to the appropriate ending balance, based on the physical count. The amount needed to balance the equation is the Cost of Goods Sold.

The Cost of Goods Sold Equation is as follows:

Beginning Inventory
\+ Purchases (net of contra accounts)
= Cost of Goods Available for Sale
e. Ending Inventory
= Cost of Goods Sold

Example 1 –

Let us use the Little Company example from above. If you remember, the opening inventory was $0, as this is a new business. Purchases of $5,000 and $10,000 were made. The new journal entries would be:

Purchases	5,000	
Cash		5,000
Purchases	10,000	
Accounts Payable		10,000

Let us suppose that those were the only purchases made during the year, and that at the end of the year a physical count of the inventory revealed that there was $11,000 worth of inventory on hand. To calculated COGS:

Beginning Inventory	$ 0
+ Purchases ($5,000 + 10,000)	15,000
- Ending Inventory (as per count)	11,000
= Cost of Goods Sold	$4,000

Example 2 –

Tetrie Company shows the following balances at the end of the year:

	Dr.	Cr.
Inventory	$175,000	
Purchases	2,700,000	
Transportation-in	36,000	
Purchase returns and allowances		48,000
Purchase discounts		27,000

Tetrie uses a periodic inventory system. A year-end count reveals that the ending inventory balance should be $360,000. The journal entry to record Cost of Goods sold at the end of the year would be as follows:

Cost of Goods Sold (calculate to balance)	**2,476,000**	
Purchase returns and allowances (close account)	48,000	
Purchase discounts (close account)	27,000	
Inventory ($360,000 – 175,000 = $185,000 increase)	185,000	
Purchases (close account)		2,700,000
Transportation-in (close account)		36,000

Note that the Inventory balance given of $175,000 would be the ending inventory balance from last year. The balance is sitting at $175,000 and it should be, according to our count, $360,000. Therefore, in order to get the balance in the inventory account to $360,000 we must increase it (or debit it) by $185,000.

Furthermore, the Purchases account and all of the associated contra accounts have been set back to $0. They are ready for the next fiscal year.

Cost of goods sold can be independently calculated as follows:

Beginning Inventory	$175,000
+ Purchases (2,700,000 + 36,000 – 48,000 – 27,000)	2,661,000
= Cost of Goods Available for Sale	2,836,000
- Ending Inventory (as per count)	(360,000)
= Cost of Goods Sold	$2,476,000

Inventory Valuation Methods

The above discussion of periodic vs. perpetual inventory systems dealt with how we track the inventory and purchases that flow through a company. We will now discuss how we attach value to the inventory; that is at what cost do we record the inventory and COGS.

There are two different valuation methods that can be used to calculate the value of inventory: specific item valuation or cost flow assumption.

Specific Item Valuation

This method is used when inventory items can be specifically identified. That is, it is possible to track each item in inventory separately. Some examples of situations where this method would be possible are: when items have specific serial numbers, like a car dealership; or when a company has relatively few items in inventory that have a specific cost associated with them, like a jeweler.

In this case, when the item is sold, we remove its specific cost from inventory and debit COGS at the carrying amount.

Cost-Flow Assumption

This method is used when items cannot be differentiated from one another, or when the value of the items is so small that it does not warrant the cost of tracking the specific item value. Under this method we can make one of two assumptions: that the first inventory that arrived is the first inventory that was sold (FIFO Method); that inventory is mixed all together and, therefore, we don't know specifically which items are being sold so we use an average of some sort to determine cost.

FIFO

Under the FIFO method, we assume that the "First In = First Out". That is to say, the ending inventory is equal to the most recent purchases. Conversely, the COGS is equal to the opening inventory + earlier purchases.

Note that regardless if a company is using a periodic or perpetual system, both the COGS and the ending inventory cost will be the same under the FIFO valuation method.

Example – On January 1, Lainey Company has 400 units in its opening inventory. They purchased these units for $1.00 each. Throughout the period, the following transactions took place:

January 3	Purchased 200 units @ $1.20 each
January 5	Purchased 400 units @ $1.25 each
January 10	Sold 700 units
January 19	Purchased 300 units @ $1.10 each
January 25	Sold 200 units

Under the *FIFO periodic method*, we first calculate the number of units in ending inventory = 400 units and then look at the most recent purchases in order to cost out the ending inventory:

January 19 purchase = 300 units x $1.10 = $330
January 5 purchase = 100 units x $1.25 = $125
Total value of ending inventory = $330 + 125 = $455

Using the *FIFO perpetual method*, the ending inventory is calculated as follows:

	Purchases (Sales)			*Balance*	
Date	*Units*	*Unit Cost*	*Total Cost*	*Units*	*Total Cost*
Jan 1				400	$400
Jan 3	200	$1.20	$240	600	640
Jan 5	400	1.25	500	1,000	1,140
Jan 10	(400)	1.00	(400)		
	(200)	1.20	(240)		
	(100)	1.25	(125)	300	375
Jan 19	300	1.10	330	600	705
Jan 25	(200)	1.25	(250)	400	455

Note that the ending inventory result under FIFO is the same under both the periodic and perpetual methods. This is not a coincidence – both approaches always provide the same result.

Cost of goods sold can be calculated in two ways. First, using the cost of goods sold equation:

Opening inventory	$ 400
Purchases	1,070
Cost of goods available for sale	1,470
Less ending inventory	(455)
	$1,015

Secondly, we know that we sold a total of 700 + 200 = 900 units. Under FIFO, we sold

the units in opening inventory plus the first of the purchases we made through the year. So COGS would be calculated as the cost of the first 900 units.

Opening Inventory	400 units @ $1.00 =	$ 400
January 3 purchase	200 units @ $1.20 =	$ 240
January 5 purchase	300 units @ $1.25 =	$ 375
COGS	900units	$1,015

Weighted-Average Method

There are two versions of this method; one is used when you have a periodic system, and one is used when you have a perpetual system.

Annual Weighted-Average – Periodic Systems

Under a periodic system, you will remember that we do an inventory count once a year to determine the ending inventory balance. We then close out the purchase account and the associated contra accounts to determine what the COGS is. The annual weighted-average for periodic systems uses a similar methodology, that is, the total sum of the year's activities are taken into account at the end of the year to make the determination of the value of inventory.

Using this method, the unit cost of inventory items is determined using the following formula:

Unit Cost = Cost of Goods Available for Sale/Units Available for Sale

Example – On January 1, Lainey Company has 400 units in its opening inventory. They purchased these units for $1.00 each. Throughout the period, the following transactions took place:

January 3	Purchased 200 units @ $1.20 each
January 5	Purchased 400 units @ $1.25 each
January 10	Sold 700 units
January 19	Purchased 300 units @ $1.10 each
January 25	Sold 200 units

Under the annual Weighted Average method, we calculate the average cost of inventory as follows:

Cost of Goods Available for Sale	*$*	*Units*
Opening Inventory (400 units @ $1.00 each)	$400	400
January 3 Purchase (200 units @ $1.20 each)	240	200
January 5 Purchase (400 units @ $1.25 each)	500	400
January 19 Purchase (300 units @ $1.10 each)	330	300
	$1,470	1,300

Average unit cost = Cost of Goods Available for Sale/Units Available for Sale
= $1,470/1,300 units
= $1.13077/unit

Ending Inventory = # units in inventory x unit cost
= 400 units x $1.13077/unit
= $452

COGS = # units sold x unit cost
= 900 units x $1.13077/unit
= $1,018

Alternatively, we can calculate COGS using the equation approach:

Opening inventory	$ 400
Purchases	1,070
Cost of goods available for sale	1,470
Less ending inventory	(452)
	$1,018

Moving Weighted-Average – Perpetual Systems

You will remember that under a perpetual inventory system, when we make a purchase we debit the inventory account for the amount of the purchase. As such, we are keeping a running total in the inventory account. The moving weighted-average system of inventory valuation takes this into account.

Under this system, the average unit cost is recalculated every time a purchase is made. Subsequently, whatever the unit cost is at the time of a sale, that is the unit cost after the last purchase previous to the sale, then that is the unit cost used to determine the COGS for that sale.

Unit Cost = Cost of all goods on hand/number of units on hand.

Example – On January 1, Lainey Company has 400 units in its opening inventory. They purchased these units for $1.00 each. Throughout the period, the following transactions took place:

January 3	Purchased 200 units @ $1.20 each
January 5	Purchased 400 units @ $1.25 each
January 10	Sold 700 units
January 19	Purchased 300 units @ $1.10 each
January 25	Sold 200 units

Remember, under this system we recalculate the unit cost each and every time we make a purchase. Unit Cost = Cost of all goods on hand/number of units on hand.

	Purchases (Sales)			*Balance*		
Date	*Units*	*Unit Cost*	*Total Cost*	*Units*	*Unit Cost*	*Total Cost*
Jan 1				400	$1.00000	$400
Jan 3	200	$1.20000	$240	600	1.06667[1]	640
Jan 5	400	1.25000	500	1,000	1.14000[2]	1,140
Jan 10	(700)	1.14000	(798)	300		342
Jan 19	300	1.10000	330	600	1.12000[3]	672
Jan 25	(200)	1.12000	(224)	400		448

[1] Unit Cost = $640 / 600
[2] Unit Cost = $1,140 / 1,000
[3] Unit Cost = $672 / 600

Cost of goods sold is equal to the cost of goods sold for the two sales: $798 + 224 = $1,022

Alternatively, we can calculate COGS using the equation approach:

Opening inventory	$ 400
Purchases	1,070
Cost of goods available for sale	1,470
Less ending inventory	(448)
	$1,022

Application of Lower of Cost or Market Rule

At the balance sheet date a company must compare the aggregate cost of its inventory to its aggregate market value. If the market value is less than cost, then the inventory must be written down to market value. Market value is defined as the net realizable value of the inventory – the sales price of the inventory item less any costs incurred to sell it.

This rule ensures that companies will not overstate their inventory balances by keeping on record at cost inventory which may have decreased in value in the marketplace.

Example –VenTure Ltd. is showing an ending inventory balance of $50,000. At the balance sheet date, the accountant determines that they could sell this inventory for $40,000. Furthermore, commissions of 10% would have to be paid to the sales team on any sale of this inventory. Show the journal entry to record the proper carrying value of the inventory.

First of all, we must determine that the inventory's net realizable value. The net realizable value of this inventory is:

= Selling Price – Commission
= $40,000 – ($40,000 X 10%)
= $40,000 – 4,000
= $36,000

At present, the inventory account has a balance of $50,000. The net inventory balance that will be reported on the statement of financial position is $50,000 – 14,000 = $36,000. We do this by creating a contra account to inventory called 'Allowance for decrease in value of inventory'. This account operates much like the Allowance for doubtful accounts in that it gets adjusted to the desired balance at year end.

Inventory Loss	14,000	
Allowance for decrease in value of inventory		14,000

Note that the Inventory Loss account will appear on the Income Statement and be registered as a loss for the company in this period.

If, next year, the analysis reveals that no allowance is required, then the allowance will be debited by $14,000 to bring it to a zero balance, the credit will be to income.

Gross Profit Method

The Gross Profit Method of inventory valuation is used to estimate inventory when other data is not available to use one of the previous methods discussed. To understand the application of this method, we must first understand how to calculate the Gross Profit %.

Example – Assume the following:

Sales	1,000,000	100%
Cost of Goods Sold	600,000	60%
Gross Profit	400,000	40%

In the above example, the Gross Profit Ratio = 40%.

If we did not have the COGS number, for whatever reason, but we did have the Gross Profit Ratio, we could estimate COGS by using the following formula:

Gross Profit = Sales x Gross Profit Ratio
= $1,000,000 x 40%
= $400,000

If Sales are $1,000,000 and Gross Profit is $400,000, then we can estimate COGS as follows:

COGS = Sales x (1 – gross profit ratio
= $1,000,000 x (1 – 40%)
= $1,000,000 x 60%
= $600,000

Example – The Gennissen Company's inventory were destroyed by a fire and you need to estimate the ending inventory. You are given the following information:

Sales to the date of the fire	$1,200,000
Opening inventory	350,000
Purchases to the date of the fire	860,000
Gross Profit Ratio	25%

The estimated cost of goods sold = $1,200,000 x (1 – 25%)
= $1,200,000 x 75%
= $900,000

The estimated ending inventory is: $350,000 $^{\text{Opening Inventory}}$ + 860,000 $^{\text{Purchases}}$
- 900,000 $^{\text{Ending Inventory}}$ = $310,000

Problems with Solutions

Problem 4-1

The following summarized transactions relate to Cozy Co., a shoe wholesaler, for the month of July 2006. The company uses a perpetual inventory system.

e. Sales totaled $80,000, all of which were made on credit with terms 2/10, n/30, FOB destination. Cozy sets the selling price on its shoes so that the cost of sales is equal to 70% of the selling price.
e. Transportation out paid on delivery of goods sold during the month equaled $1,200.
e. One customer returned goods with a sales value of $500 and was issued a credit note. All other sales made during the month were collected in the month with all customers taking advantage of the sales discount offered.
e. Merchandise was purchased at a cost of $50,000 during the month with terms 1/10, n/45, CIF destination.
e. All of the merchandise purchased during the month was paid for with Cozy taking advantage of the purchase discount offered.

Required –

Prepare the journal entries required to record the above events and transactions.

Problem 4-2

Anvil Rock Company had the following inventory and purchases for the month of May.

Date		Beginning Inventory/ Purchases		Sales	
May 1	Beginning inventory	30 @ $10.00 =	$ 300		
May 5	Purchase	60 @ $11.50 =	690		
May 14	Sale			20 @ $20.00 =	$ 400
May 21	Purchase	35 @ $12.00 =	420		
May 29	Sale			50 @ $22.00 =	1,100
Totals		125	$ 1,410	70	$ 1,500

Anvil Rock uses a perpetual inventory system.

Required –

a. Calculate the cost of ending inventory for May, assuming a FIFO cost flow system is used.
b. Calculate the cost of ending inventory for May, assuming a weighted-average cost flow method is used.
c. Prepare the journal entries to record the May 29 sale on account, assuming a first-in, first-out (FIFO) cost flow method is used.

Problem 4-3

The following information concerns one of a company's products, the Hawkeye:

Date	*Transaction*	*Quantity*	*Price/Cost*
Jan 1	Beginning Inventory	1,000	$12
Feb 5	Purchase	2,000	18
Feb 20	Sale	2,500	30
Apr 2	Purchase	3,000	23
Nov 4	Sale	2,000	33

Required –

Calculate the value of the ending inventory assuming the company uses:

(a) periodic FIFO
(b) perpetual moving average

5. Long-term Assets

Long-term assets generally comprise of any assets that will be converted to cash or used up in the business for periods exceeding one year. These generally comprise of:

- land,
- buildings, equipment and furniture and fixtures,
- long-term investments in financial instruments (i.e. the shares or the long-term debt of another company), and
- intangible assets such as patents, copyrights and trademarks.

We will only focus on the accounting for those long-term assets that are not investments in financial instruments, namely land, buildings, equipment, furniture and fixtures and intangible assets.

The essential accounting issues in accounting for long-term assets can be summarized as follows:

1. When a long-term asset is acquired, what constitutes the cost of this asset,
2. When on-going expenditures are made in order to keep the asset in operable condition, how do we account for these expenditures,
3. How do we allocate the cost of long-term assets over the periods these long-term assets are put to use in the business, and
4. How do we account for the disposal of long-term assets.

Cost of Long-Term Assets

The cost of a long-term asset is generally equal to all costs incurred in order to put the asset into productive use. These include, but are not limited to, the acquisition cost of asset, any costs of transportation to get the asset to its location and any installation costs.

If you pay one price to acquire a group of assets (i.e. land and building), the cost of acquiring these assets needs to be allocated based on the relative fair market value of the assets acquired.

For example, assume that you pay $500,000 for land and a building. An independent appraisal of the land and building are $150,000 and $450,000 respectively. The acquisition cost would be allocated to land and building as follows:

	Individual Fair Market Value per Appraisal	*%*	*Allocation of Purchase Price*
Land	$150,000	25%	$125,000
Building	450,000	75%	375,000
	$600,000		$500,000

The journal entry to record this transaction would be as follows:

Land	$125,000	
Building	375,000	
Cash		$500,000

Accounting for on-going expenditures

Once a long-term asset has been acquired, we often incur ongoing expenditures in order to maintain the asset. A determination has to be made whether the expenditure is required to maintain the asset in operable condition, in which case the expenditure should be expensed to the income statement, or whether the expenditure is a betterment of the asset and therefore needs to be capitalized to the cost of the asset on the Statement of Financial Position.

For an expenditure to be considered a betterment it must meet one of the following four criteria:

i. the useful life of the asset is extended,
ii. the rate of output of the asset is increased,
iii. the operating costs of the asset are decreased, or
iv. the expenditure enhanced the quality of the asset in a substantive way.

For example, any costs to maintain a truck, such as oil changes or brake replacements, would generally be considered to be repairs and would be expensed. However, if we were to replace the truck's engine, then we would likely increase the useful life of the truck. We would therefore capitalize the cost of the new engine to the asset account.

Accounting for the use of Long-Term Assets (Amortization of Long-Term Assets)

Long-term assets provide the ability of the company to generate future revenues. Consequently, the matching principle requires that the cost of long-term assets should be spread over the periods that the asset generated revenues. The process by which this is done is amortization of long-term assets.

There are three general approaches to amortizing capital assets:

1. *Straight-line method*. This method allocates the cost of the asset over its estimated useful life in equal amounts. The underlying assumption is that this asset generated revenues that are, more or less, equal over its useful life.

   The annual amortization expense is calculated as follows:

   (Cost – Salvage Value) / Useful Life

The cost less the salvage value is called the amortizable base of the asset. We deduct the salvage value since we do not want to write down the asset below its salvage value.

2. *Declining balance method*. This method allocates the cost of the asset over its estimated useful life by taking higher amortization charges at the beginning of the asset's useful life and lower amortization charges in the later years of the estimated useful life. The underlying assumption is that the asset generates higher revenues at the beginning of its life and that these revenues gradually decline as the asset is used up.

   The annual amortization expense is calculated as follows:

   Net book value of asset x Amortization Rate (%)

   The net book value of the asset is equal to the asset's original cost less the total amortization taken on the asset to date (accumulated amortization). The amortization rate can either be given or you may be told that the company uses the double declining balance (DDB) method of amortization. The rate used for DDB is twice the straight-line rate.

   For example, if you are told that an asset has a useful life of 10 years, then the straight-line rate is 1/10 and the DDB rate is 1/10 x 2 = 20%.

3. *Units of production method*. This method allocates the cost of the asset over its estimated useful life based on the use made of the asset. This assumes that the use can be measured, i.e. machine hours, mileage. The underlying assumption is that the asset generates revenues based on usage, i.e. a truck rental company that bases rental charges on the mileage driven.

   The annual amortization expense is calculated as follows:

   (Cost – Salvage Value) / Useful Life in units of production
   x Units of production expended during the period

Example – Assume that an asset is purchased at a cost of $300,000. The asset's estimated useful life is 8 years and the estimated salvage value of the asset is $35,000. The asset's useful life can also be measured in terms of total machine hours of 150,000 hours.

1. Under the straight-line method, the annual amortization charge will be:

   ($300,000 – 35,000) / 8 = $31,125

   The journal entry to record amortization expense will be as follows:

Amortization Expense	$31,125	
Accumulated Amortization		$31,125

2. Under the declining balance method, the amortization charges for the 8 years will be as follows. Note that we will assume double declining balance amortization at the rate of 1/8 x 2 = 25% per year.

Year	*Net Book Value Beginning of Year*	*Amortization Expense @ 25%*	*Net Book Value End of Year*
1	$300,000	$75,000	$225,000
2	225,000	56,250	168,750
3	168,750	42,188	126,562
4	126,562	31,640	94,922
5	94,922	23,731	71,191
6	71,191	17,798	53,393
7	53,393	13,348	40,045
8	40,045	5,045	35,000

Note that the year 8 amortization is not equal to $40,045 x 25% = $10,011. If we had taken $10,011 of amortization in year 8, this would have resulted in a net book value at the end of the year that would be lower than the asset's salvage value. Recall that we do not depreciate the asset below its salvage value. Therefore, the amortization taken in year 8 is the lesser of the calculated amortization of $10,011 or the amortization amount needed to bring the net book value down to the asset's salvage value.

The net book value at the end of any given year can be calculated directly as follows:

$$\text{Original Cost of Asset} \times (1 - a)^n$$

Where a = amortization rate
n = number of years since acquisition

For example, the net book value at the end of the 6^{th} year is: $\$300,000 \times 0.75^6 = \$53,393$.

3. Under the units of production method, the amortization charge per hour would be:

($300,000 – 35,000) / 150,000 hours = $1.7667 per hour.

Assume that the total number of hours of use in the first year is 18,000, then the amortization charge would be 18,000 hours x $1.7667 = $31,801.

Disposals of Long-Term Assets

On the date of disposal, we compare the net book value of the asset sold to the proceeds on disposal. The difference will be equal to the gain or loss on disposal.

For example, assume that an asset was purchased on January 2, 20x3 for $250,000. The asset's useful life was expected to be 10 years and the salvage value was estimated to be $20,000. The asset is sold at the end of 20x9 for $100,000.

The net book value of the asset at the end of 20x9 is:

Original cost	$250,000
Less Accumulated amortization	
($250,000 – 20,000) / 10 = $23,000/year x 7 years	(161,000)
Net book value	$89,000

The gain on disposal of this asset is:

Proceeds on disposal	$100,000
Less net book value	89,000
Gain on disposal	$11,000

The journal entry to record the disposal of the asset is as follows:

Cash	$100,000	
Accumulated amortization	161,000	
Asset		250,000
Gain in disposal		11,000

Changes in estimates

If the estimates of the useful life and/or the salvage value of an asset change subsequent to its acquisition, the changes in estimates are applied prospectively from the date of the change in estimate onwards.

For example, an asset costing $100,000 was purchased on January 2, 20x1. At the time, the asset's useful life was expected to be 10 years with an estimated salvage value of $20,000. In 20x5, these estimates were revised as follows: the total estimated useful life of the asset is expected to be 15 years and the salvage value is expected to be $10,000. Assume straight-line amortization.

The net book value at the beginning of 20x5 is:

Original cost	$100,000
Less Accumulated amortization	
($100,000 – 20,000) / 10 = $8,000/year x 4 years	(32,000)
	$68,000

This net book value will then be amortized over the remaining useful life of the asset. Annual amortization charges for 20x5 and future years will be:

(68,000 – 10,000) / 11 remaining years = $5,273 per year

Intangible Assets

Intangible assets are those assets that do not possess a physical quality (i.e. you cannot touch them or see them) and yet they represent costs incurred that meet the definition of an asset, i.e. they are expected to provide future benefits, are the result of a past transaction and are under the control of the company.

Examples of intangible assets are:

- trademarks – a name or symbol that identifies a company or a product,
- patents – a legal right ensuring the company's exclusive right to a product or process,
- copyrights – the protection of writings, musical compositions and works of art,
- franchises – the exclusive rights to sell products or perform services, typical within a certain geographical area
- goodwill – the added value of a business attributable to factors such as reputation, location or superior products.

Note that only expenditures incurred by the company can be capitalized as intangible assets. Internally developed intangible assets cannot be capitalized on the Statement of Financial Position. For example, the trademark 'Coca-Cola' was never purchased by the Coca-Cola Company but rather, was developed internally. Consequently, if you look at Coca-Cola's Statement of Financial Position, you will not see the value of its trademark listed as an asset.

The accounting for intangible assets depends on whether these assets have limited or an unlimited life.

Intangible assets whose life is limited should be amortized on a straight-line basis over their estimated useful lives. This need not coincide with the asset's legal life.

For example, assume that a patent is granted to a company at a cost of $100,000. The patent's legal life is 17 years but it is expected that emerging technologies will make this

patent obsolete by the end of the 5th year. In this case, we would amortize the patent over 5 years.

Intangible assets whose life is unlimited (i.e. some franchises, goodwill) are not amortized but instead subject to an annual impairment test. That is, the book value of the intangible asset is compared to its fair market value. If the fair market value is lower than book value and is not expected to recover, then the asset must be written down to the fair market value. Any impairment losses cannot be subsequently reversed if the fair market value of the asset subsequently is recovered.

Problem with Solutions

Problem 5-1

On January 1, 20x7, Resort Ltd. purchased a van to transport guests between the resort and a nearby airport. The van cost $65,000 and was expected to have a useful life of 5 years or 200,000 kilometers. At the end of its useful life, it was estimated that the van could be sold for $5,000.

Required –

a. Prepare the adjusting journal entry to record amortization expense for the year ended December 31, 20x7, assuming the company uses the straight-line method of amortization.
b. Prepare the adjusting journal entry to record amortization expense for the year ended December 31, 20x7 and 20x8, assuming the company uses the double-declining-balance method of amortization.
c. Prepare the adjusting journal entry to record amortization expense for the year ended December 31, 20x7, assuming the company uses the units-of-production method of amortization and that the van was driven 55,000 kilometers during the year.
d. During 20x8, management of the company decided that, as a result of heavy usage, the total life of the van would only be 4 years instead of the original estimate of 5 years. In addition, management felt that the van could only be sold for $2,000 at the end of its useful life. Prepare the adjusting journal entry to record amortization expense for the year ended December 31, 2008, assuming the company used the straight-line method of amortization.

Problem 5-2

The Connor Company had the following transactions over the life of an asset purchased on January 2, 20x3:

Jan 2, 20x3	Purchased equipment for $60,000. The estimated useful life of the asset is expected to be 5 years with a $10,000 salvage value.
Dec 31, 20x3	Recorded amortization expense.
Aug 31, 20x4	Routine repairs costing $600 were made to the equipment.
Dec 31, 20x4	Recorded amortization expense.
Apr 31, 20x5	Expenditures totaling $2,000 were made to the equipment. This increased the quality of the asset's output but did not change its useful life or the estimate of salvage value.
Dec 31, 20x5	Recorded amortization expense.
Dec 31, 20x6	Recorded amortization expense.
Sep 30, 20x7	The equipment was completely overhauled at a cost of $20,000. This increased the useful life of the asset by three years. The original estimate of salvage value holds.
Dec 31, 20x7	Recorded amortization expense.
Aug 31, 20x8	Sold the asset for $25,000.

Required –

Record all of the above transactions assuming that the company uses the straight-line method.

6. Liabilities

To begin our discussion about liabilities we have to first differentiate between those liabilities that will come due within on year or accounting period (current liabilities) and those liabilities that will come due at a later point in time (long-term liabilities).

Current Liabilities

A current liability is one that will be settled within one year or the business cycle of the firm, whichever is longer. We have already covered several of these when we did adjusting entries, however, we will go over the main types of current liabilities.

Accounts Payable – these are liabilities that were incurred to purchase goods, services or supplies for the operation of the company. For example, a company purchases office supplies from a supplier for $2,000 on account. The entry would be:

Office Supplies	2,000	
Accounts Payable		2,000

Wages/Salaries Payable – these are wages/salaries that are due to employees for hours worked, but have not been paid. Typically, the only time we see this account set up is at the end of a fiscal period when an adjusting entry must be made. For example, a company has a fiscal year end of March 31st. Employees were last paid on March 28th, and will not be paid again until April 4th. If the average daily wage expense is $1,000/day, the adjusting entry made March 31st would be:

Wage Expense	3,000	
Wages Payable		3,000

Note that we are debiting the Wage Expense for $3,000, which represents the three days of work (3 x $1,000/day) that were performed in the period but not paid for. On April 4th, assuming the employees worked the full 7 days in the week, the entry would be:

Wage Expense (4 days x $1,000/day)	4,000	
Wages Payable (to remove the adjusting entry)	3,000	
Cash		7,000

This way, when the payment is made for the full week, $7,000, it is split appropriately and applied to the correct periods; $3,000 to last period and $4,000 to the new period.

Current Portion of Long-term Debt – This is a current liability that is incurred when a company has long-term debt that requires a certain amount to be repaid within the next year year. For example, a company takes out a loan on January 1st for $10,000 with the terms set at 6% interest due annually. The principal must be repaid equally over 5 years. Interest and Principal payments are due December 31st of each year.

When the company takes out the loan, the journal entry would be as follows:

Cash	10,000	
Long-term debt		10,000

If a Statement of Financial Position were prepared on the January 1, we would split the long-term debt as follows:

Current liabilities	
Current portion of long-term debt	$2,000
Long-term liabilities	
Long-term debt	8,000

The debt is split into the portion that is due within the year, and that which is due later than one year. This ensures accurate reflection of the financial obligations of the company on the Statement of Financial Position.

At December 31st, the interest expense for the year would be $6,000 ($10,000 x 6%). The journal entry would be as follows:

Long-term debt	2,000	
Interest Expense	6,000	
Cash		8,000

On the Statement of Financial Position, we will now show a balance in the Current Liabilities section of $2,000, and a balance in the Long-Term Liabilities section of $6,000. Together, $8,000, it represents the amount still outstanding on the loan.

Employee Withholdings Payable – Employers are responsible for deducting income taxes, CPP and EI from employee's paycheques. Deductions for each month are due on the 15th day of the following month. Not only must the company submit the employee's portion, but they also must submit the employer portion of CPP and EI. The employer matches the employee's contribution for CPP, and pays 1.4 times the employee deduction for EI.

For example, a company pays its employees monthly. Wages total $100,000, and the employer ducted the following amounts from its employees' cheques: Income Taxes, 27,000; CPP, $7,500; EI, $8,000. The entry to record payroll for the month would be:

Wages Expense	100,000	
Employee Withholdings Payable		
($27,000 + 7,500 + 8,000)		42,500
Cash		57,500

At the same time, the company would record its portion of payroll expenses due to the government:

CPP Expense ($7,500 x 100%)	7,500	
EI Expense ($8,000 x 1.40)	11,200	
Employee Withholdings Payable		18,700

Note that CPP Expense and EI Expense could be tracked separately, as done above, or simply lumped in with Wages Expense.

On the 15th of the next month, the company pays the government:

Employee Withholdings Payable ($42,500 + 18,700)	61,200	
Cash		61,200

Contingent Liabilities

One of the guiding principles of accounting is the idea of conservatism. This principle states that, when there are multiple options or positions or courses of action available to present financial statements or financial data that the most conservative approach should be taken. The justification is that the financial statements should not be misleading or give false hope or information to any reader.

One of the resulting GAAP rules that stems from this idea of conservatism is the establishment of contingent liabilities. Contingent liabilities are those liabilities which are likely to be incurred in the future, but have not yet come to be. If a company knows that there will be a liability, and therefore a loss of some kind to the company, then they must disclose it when they know about it.

A contingent loss should be recognized only when:

a) it is likely that a future event will confirm the loss, and
b) the loss can be reasonably estimated.

If a contingency meets the first criteria but not the second, then it has to be disclosed through a note in the financial statements, but it does not have to be recognized.

For example, your company is being sued for $400,000. Your lawyer says that previous case law in similar matters is not in your favor and you will likely lose and the judge will award the full amount to the plaintiff. You would record or recognize the FULL amount. The journal entry would be:

Unrecognized Loss on lawsuit	400,000	
Contingent Liability – lawsuit		400,000

If, in the same scenario, your lawyer felt you would lose, but there was no legal precedent for the amount that would be awarded and therefore are unable to estimate the future loss. You would simply write a note in the financial statements disclosing the lawsuit, and the fact that you were likely to lose, but you would not have to record the loss or the liability.

If, in the same scenario, your lawyer felt you would win, then you do not have to do anything because you do not meet either of the criteria for recording a contingent liability.

Warranties & Premiums

Another of the guiding principles of accounting is the matching principle. This principle states that for all revenues generated in a specific period, all expenses related to those revenues should be recorded at the same time. This principle is the one that guides us when making adjusting entries at the end of the year with regards to expenses, such as wages, that have been incurred but not paid.

Another example of matching has to do with warranties. When a company sells a product that has a warranty, they should try and estimate what the total warranty expense will be so that it can be matched and recorded in the period when the revenue was generated. The warranty expense is normally determined through evaluating historical data and coming up with a % of sales that represents the future warranty costs.

For example, a company sells vacuum cleaners that come with a 2-year warranty. The company estimates that warranty expense, on average, is 4% of sales. Total Sales for the year totaled $300,000. The journal entry to record warranty expense for the year would be:

Warranty Expense ($300,000 x 4%)	12,000	
Warranty Liability		12,000

This entry not only matches the expense to the period when the revenues were generated, but it also sets up a liability that will be drawn down as actual expenses are incurred over the life of the warranty.

Continuing on with the same example, let's assume that during the next year, the company pays $10,000 to repair various vacuum cleaners that are under warranty. The journal entry would be:

Warranty Liability	10,000	
Cash/Inventory/Wages		10,000

Premium liabilities come to be when a company offers its customers some product or service through the redemption of coupons or some other device whereby the customer can receive goods/services in the future based on current sales. Again, in order to adhere to the matching principle, we must record the associated expense in the period when the

original sale is made.

For example, for every $10 your customers spend, they receive 1 coupon. They can then redeem 10 coupons for a watch valued at $10. Based on past redemption data, you have determined that only 40% of your customers will redeem their coupons. Your sales for the year were $800,000. To record the premium liability at the end of the year, the journal entry would be:

Premium Expense*	32,000	
Premium Liability		32,000

* $800,000/$10 = 80,000 coupons x 40% = $32,000

Whenever coupons are redeemed, the premium liability account is drawn down.

Long-term Liabilities

Long-term liabilities are defined as liabilities that would not be reasonably expected to be liquidated within a year. These typically include long-term bonds, notes payable, long-term leases and pension obligations.

We will not get into a discussion of leases, pensions and other more complicated long-term liabilities in this section. We will instead focus on long-term bonds, one of the most frequently used financing instruments in business.

The Time Value of Money

Before we begin our analysis of accounting for bonds we must first discuss the concept of time value of money. The premise behind this is that a dollar today is not worth the same as a dollar received tomorrow, or a year from now, or ten years from now. If you are going to be receiving money in the future, then you are missing out on the opportunity to invest that money today and earn interest on it. Furthermore, you are taking on the risk that the money might not be repaid at all. The combination of these two facts results in a dollar today being worth more than a dollar received in the future. The farther in the future you are to receive the funds, the greater the "discount" or decrease in the dollar value will be.

There are several key concepts that will be illustrated through examples in this section. Furthermore, this section will also serve as a tutorial in using your financial calculator to do the calculations. Note that only three financial calculators are allowed in the Bridging Program and on the CMA Canada Entrance Exam:

Texas Instruments	TI BA II Plus (including the Professional model)
Hewlett Packard	HP 10bII (or HP 10Bii)
Sharp	EL-738C

If you do not have one of these calculators, it is recommended that you acquire one

before continuing with this section, otherwise you can move on to the following section and finish this section later.

The format for solutions using a financial calculator is as follows:

	N	**I/Y**	**PV**	**PMT**	**FV**
Enter	5	6			1000
Compute			X		

In the above example, we are trying the calculate the present value of $1,000 to be received in 5 years from now at an interest rate of 6%.

If you are using the Texas Instruments BA II Plus, you need to do the following:

- set the calculator to accept one payment per year as follows:
  1 2ND N
  You only need to do this once.
- clear the Time Value of Money memory as follows:
  2ND FV
  You should do this every time you do a time value of money calculation.
- enter the numbers above in the TVM memory registers
- to solve, press CPT and the TVM register you are attempting to solve for, in this case PV
- the answer provided is -747.26. This means that if you were to invest $747.26 today (money out of pocket and therefore the negative sign) and invest it for 5 years at 6% compounded annually, the amount would grow to $1,000.

If you are using the Hewlett Packard 10BII, you need to do the following:

- set the calculator to accept one payment per year as follows:
  1 then Orange Button then PMT
  You only need to do this once.
- clear the Time Value of Money memory as follows:
  Orange Button C ALL
  You should do this every time you do a time value of money calculation.
- enter the numbers above in the TVM memory registers
- to solve, press the TVM register you are attempting to solve for, in this case PV
- the answer provided is -747.26. This means that if you were to invest $747.26 today (money out of pocket and therefore the negative sign) and invest it for 5 years at 6% compounded annually, the amount would grow to $1,000.

Calculating the Present Value of a Future Single Sum - Assume you are going to receive $10,000 from your mother 5 years from now. If the current and expected future rate of return is 6%, what is that $10,000 worth in "today's dollars"?

	N	**I/Y**	**PV**	**PMT**	**FV**
Enter	5	6			10000
Compute			7,472.58		

Present Value of an Annuity - An annuity is defined as a series of identical cash flows that end at a specified time. Assume you inherit $1,000,000 from your favorite uncle. You want to be able to withdraw $60,000 per year for the next 30 years. If i=7%, how much of the $1,000,000 will you have to set aside in order to set up this annuity?

	N	**I/Y**	**PV**	**PMT**	**FV**
Enter	30	7		60000	
Compute			X = $744,542.47		

Annuity Payment Calculation - You have retired with $675,000 in the bank. You expect to live another 25 years. Assume the rate is 7%, how much can you withdraw each year?

	N	**I/Y**	**PV**	**PMT**	**FV**
Enter	25	7	675000		
Compute				X = $57,992.10	

Your company is purchasing a piece of equipment costing $80,000. The manufacturer is offering you financing at a rate of 6.5% on a 36-month loan. What is your monthly payment to the manufacturer going to be?

	N	**I/Y**	**PV**	**PMT**	**FV**
Enter	3	6.5	80000		
Compute				X = $30,206.06	

Bonds

A bond is a financial instrument that is a contractual obligation by a company to pay a stated amount of money at some stated time in the future, as well as make interest payments on the stated amount. A few definitions:

> Face Value – the stated amount of the bond and is equal to the redemption value of the bond on its maturity date.
>
> Coupon – the amount of semi-annual interest payments to be made on the bond.
>
> Coupon Rate – the stated interest rate to be paid on the face value. Coupon rate = Annual Coupon Payments/Face value
>
> Yield-to-maturity (YTM) – the rate of return that bondholders expect on the bond given its risk. It is rare that the yield-to-maturity rate and coupon rate are the same. Also called the market rate.

If the YTM > Coupon Rate, then the bond will sell at a discount. This is because the buyer of the bond could get a higher rate on the open market (the YTM) than they can from investing in the bond (the Coupon Rate). The market takes this into consideration, and the bonds will sell for a value less than the face value of the bond. For example, if you issue a bond with a coupon rate of 5% and the YTM is 6%, then in order to sell your bonds you will have to sell them at less than face value because investors would be willing to pay face value if they could get a return of 6%.

If the YTM < Coupon Rate, then the bond will sell at a premium. This is because the buyer of the bond gets a higher return by investing in the bonds, and therefore is willing to pay more than face value for the bonds in order to reap this benefit.

To calculate the value of a bond at <u>any point in time</u>:

> N = Number of periods left until maturity
> I = YTM or Market Interest Rate (note that the YTM needs to be divided by two since the coupon payments are made semi-annually)
> PMT = the semi annual coupon Payment
> FV = the Face Value of the bond
> Solve for PV

It is important to remember that bonds pay coupon payments semi-annually. As such, because PMT is equal to the payment made every six months, we must adjust the other factors in the formula to a "6-month" basis. N will equal the number of coupon payments left; not the number of years. Furthermore, the YTM is normally expressed as an annual rate; therefore it will have to be cut in ½ to reflect the situation. The PMT & FV remain the same.

Example - On January 1, 20x8 you issue $2,000,000 of bonds. Interest will be paid semi-annually on June 30 and December 31. The Coupon Rate = 5.8% and they mature in 10 years. YTM = 7%. How much would be raised through this bond issuance?

	N	**I/Y**	**PV**	**PMT**	**FV**
Enter	20	3.5[1]		58000[2]	2000000
Compute			X = $1,829,451		

[1] YTM of 7% / 2 = 3.5%
[2] $2,000,000 x 5.8% x ½ = $58,000 coupon payment, every 6 months.

The Present Value of the bonds, or the amount that we would have received in proceeds would be equal to $1,829,451. This is less than the face value of $2,000,000. This is because our coupon rate of 5.8% is less than the market rate of 7%. In order to attract investors, we have to sell our bonds at a discount.

The journal entry to record the sale would be as follows:

Cash	1,829,451	
Bonds Payable		1,829,451

Calculating Interest Expense on Bonds

It is now June 30th and the first coupon payment is due. We have already calculated that we will be writing a cheque for $58,000 to cover our coupon obligation. However, this $58,000 is not our interest expense.

The interest expense for a given period of time is calculated by multiplying the carrying value of the bonds for the period times the market interest rate or YTM. The difference between the Interest Expense and the Coupon Payment is either debited or credited to the Bonds Payable account depending on whether the bond was issued at a premium or a discount.

Continuing our example, on June 30th, you would record the following journal entry:

Interest Expense (1,829,451 x 7% x ½)	64,031	
Bonds Payable		6,031
Cash		58,000

Note that the $6,301 credit to Bonds Payable increases the carrying value of the bond payable account to (1,829,451 + 6,301) $1,835,482. This will be the amount used to calculate the interest expense on December 31st.

On December 31st, the entry for interest expense would be:

Interest Expense (1,835,482 x 7% x ½)	64,242	
Bonds Payable		6,242
Cash		58,000

After all 20 interest payments have been made, the balance in the Bonds Payable account will have been written up to $2,000,000, give or a take a few dollars for rounding. At the time of settlement, therefore, the journal entry will be:

Bonds Payable	2,000,000	
Cash		2,000,000

Problems with Solutions

Problem 6-1

You run a computer repair company. In order to increase customer loyalty in this fiercely competitive environment you have started a coupon program. For each $10 your customers spend, then receive 1 coupon. They can redeem 15 coupons for a $25 iTunes gift card. You have been running this program for several years, and data shows that approximately 55% of your customers redeem their coupons.

The following data relate to the past year:

Sales	$375,000
Premium Liability Account – Opening Balance	40,000
Coupons Actually Redeemed during the year	22,500 coupons

Required –

What would be the journal entries to record the premium expense and the actual premium costs incurred?

Problem 6-2

Company X provides a 3-year warranty on all of the products it sells. Sales for the current year were $3,000,000 and it is estimated that the warranty expense is equal to 5% of sales. The warranty liability at the beginning of the year was $165,000 and actual costs incurred to service warranties during the year amounted to $130,000.

Required –

Prepare all journal entries related to the warranty for the current year. What is the balance in the warranty liability account at the end of the year?

Problem 6-3

On July 1, 20x1, Gamma Corporation issued bonds with a face value of $500,000 and a coupon rate of 10%. The bonds pay interest semi-annually on December 31 and June 30 and are due in five years. Assume that the going market interest rate for similar bonds on July 1, 20x1 is 8%.

Required –

Prepare the journal entries to record the issue of the bonds on July 1, 20x1 and the first two interest payments.

Problem 6-4

The Kaplan Corporation issued $10,000,000 of 8.5% coupon bonds on December 31, 20x4. The bonds mature in 15 years. Coupon payment dates are June 30 and Dec 31 of every year. The yield to maturity on December 31 was 8%. Assume that the Kaplan Corporation as a December 31 year end.

Required –

Prepare all journal entries with regards to this bond for the years 20x4 and 20x5.

7. Shareholders' Equity

As mentioned in Chapter 1, Shareholders' Equity is fundamentally made up of two elements: contributed capital and retained earnings. Contributed capital comprises of the investment made in the corporation by its shareholders. Shareholder investments will result in the company issuing shares to the investors – these shares can take the form of preferred shares or common shares. Retained earnings represent the cumulative earnings of the corporation less any dividend distributions to its shareholders.

Common Shares

Common shares typically have the following features:
- they provide the right to vote at annual meetings,
- upon liquidation of the company, any cash remaining after all obligations have been settled revert back to common shareholders, and
- they are a perpetuity, meaning they never become due.

The corporation is under no obligation to provide a financial return to common shareholders, that is, any dividend declarations are at the sole discretion of the company's board of directors. Dividends become a liability of the corporation only when the board of directors declares them.

Common shares can be issued for cash or any other asset. For example, if common shares are issued for $100,000 cash, then the journal entry would be:

Cash	$100,000	
Common shares		$100,000

If common shares are issued in exchange for a parcel of land whose fair market value is $250,000, the journal entry would be:

Land	$250,000	
Common shares		$250,000

When common shares are repurchased, the shares must be cancelled (i.e. a company cannot purchase its own common shares, hold them, and then re-sell them). The debit to the common shares account is equal to the weighted average book value per share times the number of shares retired.

If the book value per share is less than the cash paid out to retire the shares, we credit an account called Contributed Surplus for the difference.

If the book value per share is greater than the cash paid out to retire the shares, then the debit required to balance the journal entry is allocated as follows:
- if there is any Contributed Surplus relative to common shares, it can be drawn down,

- any remainder gets debited to Retained Earnings.

Example – The Noor Company's shareholders' equity section at December 31, 20x6 was as follows:

Common shares, 1,000,000 shares outstanding	$15,000,000
Retained earnings	12,000,000

The following transactions took place during the year:

Jan 15	Issued 100,000 common shares for $2,500,000 cash
Mar 18	Issued 50,000 common shares in exchange for land valued at $1,000,000
Apr 30	Retired 20,000 common shares at a total cost of $260,000
Jun 16	Issued 250,000 common shares for $7,500,000 cash
Aug 18	Retired 10,000 common shares at a total cost of $280,000

The journal entries to record the above transactions are as follows:

Jan 15	Cash	$2,500,000	
	Common shares		$2,500,000
Mar 18	Land	1,000,000	
	Common shares		1,000,000
Apr 30	Common shares (20,000 x $16.09[1])	321,800	
	Contributed surplus		61,800
	Cash		260,000

[1] Balance in common share account:
= $15,000,000 + 2,500,000 + 1,000,000
= $18,500,000
Number of common shares outstanding:
= 1,000,000 + 100,000 + 50,000
= 1,150,000
Book Value per common share:
= $18,500,000 / 1,150,000 = $16.09

Jun 16	Cash	7,500,000	
	Common shares		7,500,000
Aug 18	Common shares (10,000 x $18.61[2])	186,100	
	Contributed surplus	61,800	
	Retained earnings	32,100	
	Cash		280,000

[2] Balance in common share account:
= $18,500,000 – 321,800 + 7,500,000
= $25,678,200
Number of common shares outstanding:
= 1,150,000 – 20,000 + 250,000
= 1,380,000
Book Value per common share:
= $25,678,200/ 1,380,000 = $18.61

Preferred Shares

Preferred shares have the following characteristics:

- they are generally non-voting shares (voting privileges are typically only granted if the corporation does not pay the annual preferred share dividend),
- they carry a stated dividend per share,
- like common shares, they are a perpetuity.

Like common shares, the corporation is under no obligation to provide a financial return to common shareholders, that is, any dividend declarations are at the sole discretion of the company's board of directors. Dividends become a liability of the corporation only when the board of directors declares them. However, in most cases preferred shares are cumulative. This means that if dividends are missed, any dividends in arrears due to preferred shareholders must be paid before any dividends can be paid to common shareholders.

Example – The Jarvis Corporation's shareholders' equity as at December 31, 20x5 is as follows:

Common shares, 1,000,000 shares outstanding	$35,000,000
Preferred shares, $8.00, cumulative, 100,000 shares outstanding	10,000,000
Retained earnings	40,000,000

The preferred share dividends were last paid on December 31, 20x3. It is now December 1, 20x6 and management wants to pay a dividend of $5 per common shares.

First, the preferred dividends in arrears for 20x4 and 20x5 will have to be paid:

100,000 shares x $8.00 x 2 years = $1,600,000

Next, the preferred dividends for the year 20x6 must be paid:

100,000 shares x $8.00 x 1 year = $800,000

Finally, the dividend to common shareholders can be paid:

1,000,000 shares x $5 = $5,000,000

The total dividend to be declared will be: $1,600,000 + 800,000 + 5,000,000
= $7,400,000

Stock Splits

When the stock price of a corporation is high, the stock may become unattractive to small shareholders who have to disburse larger sums in order to acquire shares of the corporation. In order to reduce the share price, the company will split the stock. For example, a 2:1 split means that the number of shares outstanding will double. This will result in the share price dropping by half. If a shareholder owns 1,000 shares of shares before the split, this same shareholder will receive an additional 1,000 shares as a result of the stock split resulting in a total of 2,000 shares.

There is NO journal entry required when a stock split is declared. All that happens is that the number of shares issued changes.

Dividends

On the date a dividend is declared it becomes a legal liability of the company and the following journal entry is made:

Retained earnings	XXX	
Dividends payable		XXX

On the date of payment, the following entry is made:

Dividends payable	XXX	
Cash		XXX

Retained Earnings

Retained earnings represents the accumulated earnings of the corporation net of any dividends paid. Any premiums paid on retirement of shares are also charged to retained earnings.

The statement of retained earnings is as follows:

Retained earnings, beginning of year	$ XXX
Premium on redemption of shares	-XXX
Net income (loss) for the year	±XXX
Dividends	-XXX
Retained earnings, end of year	$ XXX

Problems with Solutions

Problem 7-1

The articles of incorporation authorize Hilary and Sam Corporation, a new company, to issue 10,000 $6 non-cumulative preferred shares and 100,000 common shares. In its first month, Hilary and Sam Corporation completed the following transactions:

February 2	Issued 9,000 common shares to Hilary and 12,000 shares to Sam in return for cash equal to the shares' market value of $6 per share.
February 10	Issued 400 preferred shares to acquire a patent with a market value of $40,000.
February 15	Declared a 2 for 1 stock split.
February 26	Issued 2,000 common shares for cash of $12,000.
February 27	Declared cash dividends on the preferred shares.
February 28	Declared cash dividends on the common shares in the amount of $0.32 per share.

Required -

1. Record the transactions in journal entry form.

2. Prepare the shareholders' equity section of the Payne and Papineau Inc. balance sheet as at February 28. Net income for the month was $56,000

Problem 7-2

M-F Inc. is authorized to issue 100,000 common shares and 50,000, $1.00, cumulative preferred shares. During the first year of operations the following events occurred:

a. Issued 1,000 common shares at $115 per share.
b. Issued 2,000 preferred shares in exchange for equipment. The equipment had a fair market value of $40,000.
c. Issued 1,000 preferred shares at $20 each.
d. Declared a cash dividend on preferred shares.
e. Issued 1,500 common shares at $120 each.
f. Paid the preferred dividend.
g. Declared and paid a $5.00 common share dividend
h. Convertible bonds with a face value of $50,000 and book value of $53,000 were converted into 500 common shares. The convertible bonds were issued earlier in the year.

Net income was $64,000 for the year.

Required -

1. Provide the journal entries for each transaction above.
2. Prepare the shareholders' equity section of the Statement of Financial Position.

8. The Accounting Cycle Revisited

The purpose of this chapter is to bring all of the accounting issues discussed in the previous chapters together in the form of integrative problems. There is no new material, just the integration of previously covered materials. Therefore, the only materials in this chapter are the problems with solutions. Enjoy!

Problem 8-1

The Haider Corporation's post-closing trial balance at December 31, 20x5 was as follows:

	Dr.	***Cr.***
Cash	$36,000	
Accounts receivable	176,000	
Allowance for doubtful accounts		$23,000
Inventory	320,000	
Prepaid insurance	1,400	
Land	40,000	
Building	300,000	
Accumulated amortization – building		120,000
Equipment	145,000	
Accumulated amortization – equipment		38,000
Patents	34,000	
Accounts payable		127,000
Salaries payable		5,600
Income taxes payable		12,000
Warranty liability		13,000
Bonds payable		419,600
Common stock		150,000
Retained Earnings		144,200
	$1,052,400	$1,052,400

Additional information

1. The company uses a FIFO periodic inventory system.
2. The prepaid insurance is for a one year policy taken out in 20x5 that expires on March 1, 20x6.
3. The building is being amortized on a straight-line basis over 40 years.
4. The equipment is being amortized using the double declining balance method. The average useful life of equipment is 10 years.
5. The patent remaining useful life at December 31, 20x5 is 8 years.
6. The bonds were issued on January 2, 20x1. The face value of the bonds is $400,000, the coupon rate is 6.5% and the yield to maturity at the time the bonds were issued was 6%. Coupon payment dates are on June 30 and Dec 31. The bonds mature on December 31, 20x20.
7. The company provides a one year warranty on its products. Warranty expense is estimated at 1.5% of sales.
8. There are 10,000 shares of common stock outstanding.

The following transactions took place during the year:

1. Total sales on account were $1,600,000.
2. Cash collections on accounts receivable totaled $1,520,000.
3. Accounts written off totaled $34,000.
4. Recoveries of previously written off accounts receivable totaled $5,000.
5. Inventory purchased on account totaled $960,000.
6. Inventory costing $16,000 was returned to suppliers.
7. On March15, an additional 3,000 common shares were issued for $75,000.

Cash disbursements were as follows:

8.	Payments on accounts payable	$945,000
9.	Payments for salaries	320,000
10.	Interest payments on bonds payable	26,000
11.	Purchase of equipment on January 2	30,000
12.	Warranty repairs made to products sold	25,000
13.	Payments to the Canada Revenue Agency for income taxes	40,000
14	Repurchase of 1,000 common shares on Aug 23	22,000
15.	Insurance policy taken out on March 1 – one year policy.	2,400
16.	Operating expenses paid	130,000

The following adjustments need to be made at year-end:

17. The accounts receivable aging schedule is as follows:

	Accounts Receivable	*Estimated % Uncollectible*
0 – 30 days	$144,000	3%
31 – 60 days	43,000	7%
61 – 90 days	23,000	20%
90 + days	12,000	50%
	$222,000	

18. An adjustment is made for insurance expense.

19. Amortization expense on the building, equipment and patents.

20. The inventory was counted on December 31, 20x6 and the total cost of the inventory was determined to be $378,000. The aggregate net realizable value of the inventory was determined to be $365,000.

21. The warranty expense for the year is accrued.

22. Salaries payable at December 31, 20x6 amount to $6,700.

23. Dividends of $80,000 were declared and paid on December 15, 20x6.

24. The income tax expense is 40%.

Required –

a. Prepare journal entries for the above transactions and enter all the above transactions in T-Accounts.
b. Prepare a trial balance
c. Prepare the following statements:
   - Income Statement
   - Statement of Retained Earnings
   - Statement of Financial Position

Problem 8-2

Pacific Company adjusts and closes its books each December 31. It is now December 31, 20x5, and the adjusting entries are to be made. You are requested to prepare the adjusting entry that should be made for each of the following items (note that the original entries have been made, i.e. you do not need to provide the original entry):

a. Credit sales for the year amounted to $320,000. The estimated loss rate on bad debts is 3% of sales.

b. Unpaid and unrecorded wages incurred at December 31 amounted to $4,800.

c. The company paid a two-year insurance premium in advance on April 1, 20x5, amounting to $9,600, which was debited to prepaid insurance.

d. Machine A, which cost $80,000, is to be depreciated for the full year. The estimated useful life is 10 years, and the residual value, $4,000. Use straight-line amortization.

e. The company rented a warehouse on June 1, 20x5, for one year. It had to pay the full amount of rent one year in advance on June 1, amounting to $9,600, which was debited to rent expense.

f. The company received from a customer a 9% note with a face amount of $12,000. The note was dated September 1, 20x5; the principal plus the interest is payable one year later. Notes receivable was debited, and sales revenue was credited on the date of sale, September 1, 20x5.

g. On April 1, 20x5, the company signed a $60,000, 10% note payable. On that date, cash was debited and notes payable credited for $60,000. The note is payable on March 31, 20x6, for the face amount plus interest for one year.

h. The company purchased a patent on January 1, 20x5, at a cost of $11,900. On that date, the patent account was debited and cash credited for $11,900. The patent has an estimated useful life of 17 years and no residual value.

i. On January 1, Pacific Corporation had a supplies inventory of $4,500. During the year, supplies of $21,900 were purchased and debited to supplies expense. At the end of the year, inventory of $9,200 was on hand.

j. During the year, pacific Company sold 10,000 units of a product that was subject to a warranty. Past history indicates that 3% of units sold require repairs at an average cost of $40 per unit. The sales have been recorded; costs incurred for the warranty to date, totalling $8,700, were debited to warranty liability when paid. No warranty expense has been recognized.

k. ABC Corporation wrote off a $16,000 bad debt.

l. Pre-tax income has been computed to be $80,000 after all the above adjustments. Assume an average income tax rate of 30%.

9. The Statement of Cash Flow

The statement of cash flow shows a company's inflows and outflows of cash during a particular period. This statement is broken into three distinct sections, and shows how a company's actions have affected its net cash position throughout the period. Some students find the statement of cash flow to be a challenge because they are still thinking with an "accrual" mind. Most of what we do, as accountants, is based on the accrual system. Try to keep in mind that when you are working with this statement, your main concern is incoming and outgoing cash.

Components of the Statement of Cash Flow

There are three sections to the statement of cash flow:

Cash from Operations – this section shows how much cash is generated or used up by the firm in its daily operating business.

There are two distinct methods in presenting cash flow from operations: the direct and the indirect method. GAAP suggests a preference for the direct method; however, either the direct or indirect methods can be used. Both methods will be covered later in this section.

Cash from Financing Activities – this section looks at any changes in the long-term liability and shareholders' equity section of the Statement of Financial Position. If a company issues new debt, this generates cash; if a company pays off or retires debt this uses cash. If a company pays dividends, then this uses cash. If a company issues new shares, this generates cash. If a company retires shares, this uses cash

Example - A company reports the following partial data from the previous year:

Partial Statement of Financial Position

	20x8	**20x7**
Non-Current liabilities		
Bonds payable	$ 400,000	$ 250,000
Mortgage payable	150,000	180,000
Shareholders' Equity		
Common shares	650,000	450,000
Retained earnings	300,000	215,000

Additional information:

Dividends of $150,000 were declared and paid to shareholders during the year.

The cash flow from financing can be calculated as follows:

Proceeds on issuance of bonds payable	$ 150,000
Cash paid to reduce mortgage payable	(30,000)
Proceeds on issuance of common shares	200,000
Cash dividends paid	(150,000)
	$ 170,000

To calculate the company's net income for 20x8, we analyze at the Retained Earnings Account:

Opening Retained Earnings
+ Net Income
- Dividends
= Closing Retained Earnings

In the above case, we know all numbers in this formula except Net Income. Rearranging the formula, we can calculate the Net Income.

$215,000 + Net Income - $150,000 = $300,000
Net Income = $235,000

Alternatively, we know that retained earnings increased by a net of $85,000. Given that dividends decrease retained earnings, the net income for the year is $85,000 + dividends of $150,000 = $235,000.

Cash flow from Investing Activities – this section discloses cash that was generated or used through the sale or purchase of long-term assets.

Often, when dealing with this section, we have to reconcile the long-term asset accounts, and changes in them from one period to the next. Remember, when a sale of a long-term asset is made, we remove the asset and all associated accumulated amortization. The difference between the proceeds, or cash we receive, and the NBV (cost – accumulated amortization) is recorded as a gain/loss on sale.

Example - A company is showing the following data regarding its last two fiscal periods:

Partial Statement of Financial Position

	20x8	**20x7**
Non-Current assets		
Equipment	$ 350,000	$ 300,000
Accumulated Amortization	(180,000)	(170,000)
Furniture & Fixtures	100,000	75,000
Accumulated Amortization	(10,000)	(60,000)
Land	100,000	0

Additional Information:

- $50,000 worth of equipment was purchased for cash during the year.
- the original fixtures, costing $75,000 with a NBV of $15,000, were sold at a gain of $10,000.
- new fixtures were purchased for $100,000 cash.
- the land was obtained through issuing $100,000 worth of common shares to the supplier.

The cash flow from investing section of the Statement of Cash Flow would be as follows:

Purchase of Equipment	($50,000)
Proceeds on sale of Fixtures*	25,000
Purchase of Fixtures	(100,000)
	($125,000)

* The cost of the fixtures was $75,000 and the accumulated amortization was $60,000 - giving a net book value of $15,000. If the gain on sale was $10,000, then the cash proceeds on the sale of fixtures would have to be $15,000 + 10,000 = $25,000.

Note that because no cash exchanged hands for the purchase of the land, it does not appear in this section. All non-cash transactions are by definition excluded from the statement of cash flow.

Cash Flow from Operations – Direct Method

This method of determining cash flow from operations uses the income statement as its starting point, and essentially takes each income statement item and converts it into cash. There are a minimum of four main sub-sections in determining the cash flow from operations (note that these are a minimum, there can be as many as you want):

Cash collected from Customers
(Sales ± changes in Accounts Receivable)

Cash paid out to Suppliers & for Operating Expenses
(Cost of goods sold + Operating Expenses ± changes in inventory and prepaid expenses ± changes in non-cash current liabilities, excluding interest payable, income taxes payable and dividends payable)

Cash paid for Interest
(Interest Expense ± changes in interest payable)

Cash paid for Income Taxes
(Income Tax Expense ± changes in income taxes payable)

Example – Calculate cash flow from operations – direct method.

Jack's Joke Shop Inc.
Income Statement
For the Year ended December 31, 20x7

Sales revenue	$660,000
Cost of Goods Sold	231,000
Gross Margin	429,000
Operating Expenses:	
Salaries Expense	200,000
Amortization Expense	5,000
Office and Administration Expenses	120,000
	325,000
Operating income	104,000
Interest Expense	15,000
Net Income before taxes	89,000
Income tax Expense	21,600
Net Income	$ 67,400

Jack's Joke Shop Inc.
Comparative Unclassified Statement of Financial Position
As at December 31, 20x7

	20x7	**20x6**
ASSETS		
Cash	$76,000	$42,000
Accounts Receivable	27,000	21,000
Inventory	12,000	10,000
Capital assets	82,000	82,000
Less accumulated amortization	(25,000)	(20,000)
	$172,000	135,000
LIABILITIES		
Accounts Payable	8,000	10,000
Salaries Payable	5,000	3,000
Interest Payable	2,000	1,000
Taxes Payable	14,000	2,000
Bonds Payable	39,000	46,000
	68,000	62,000
SHAREHOLDERS' EQUITY		
Common Stock	80,000	50,000
Retained Earnings	24,000	23,000
	104,000	73,000
	$172,000	$135,000

Cash collected from customers:

Sales	$660,000
Less increase in accounts receivable	(6,000)
	$654,000

Why did we subtract the $6,000 increase in Accounts Receivable. We are not told what percentage of the total sales are made for cash, and which are made on credit, nor are we told how much of the 20x6 accounts receivable balance have been collected. However, because we are told the balance at December 31, 20x6 and the balance at December 31, 20x7, we can simply analyze the difference.

If accounts receivable increased, then this means that sales have not yet been collected – that is, we accrued more sales than we collected, therefore we reduce sales to calculate cash collected from customers. Conversely, if accounts receivable decreased, then we collected more than we accrued and this would be added to sales.

Cash paid to suppliers & for operating expenses:

Cost of goods sold		$231,000
Plus increase in inventory		2,000
Plus Decrease in accounts payable		2,000
		235,000
Salaries expense	$200,000	
Less increase in salaries payable	(2,000)	198,000
Office & Administration Expenses		120,000
		$553,000

Note that the starting point for each calculation is the following expense items: cost of goods sold, salaries expense, and office & administrative salaries. These comprise all of the expense items on the statement of financial position with the exception of amortization expense, which is a non-cash item and interest and income tax expense which will be dealt with separately. Note also that although we combined all three expense items in one single calculation, it would have been correct to show these as three separate line items in the cash flow from operations section of the Statement of Cash Flow:

- Cash paid out to suppliers
- Cash paid out to employees
- Cash paid out for office and administrative expenses

With regards to cash paid put to suppliers the starting point is cost of goods sold. The first thing we do is adjust it to obtain the purchases made during the period. In this case, the amount of our Inventory account increased by $2,000. This means that we purchased additional inventory that is now sitting in our warehouse, waiting to be sold. Therefore,

to calculate purchases, we have to add the $2,000 increase to COGS. Purchases for the year in this case would be $233,000 ($231,000 + 2,000).

If, on the other hand, inventory decreased, then this means that we would have purchased less than what was sold and we would have decreased COGS in order to obtain purchases.

In dealing with the change in accounts payable, if the Accounts Payable account decreases, like it did in the above example, then we have paid more to our suppliers than the purchases. This is why we add back the $2,000. Again, should the opposite have occurred, we would have subtracted the amount from COGS to get total money paid to suppliers.

All other expenses, other than interest and taxes, are treated in the manner that the Salaries Expense was treated above. That is, you start with the Income Statement amount and then account for any changes in the associated statement of financial position account(s). Note, as in the case of Office & Administration Expenses above, there appears to be no associated statement of financial position account. If there is no such account, then you simply include the full expense amount as the cash paid for that expense.

Any increase in liabilities, like salaries payable, is subtracted from the expense to get to the total cash paid, and any decrease in liabilities is added.

Cash paid for interest:

Interest expense	$15,000
Less increase in interest payable	(1,000)
	$14,000

In this case, interest payable went up which means that we accrued more interest than we paid, so we deduce the increase in interest payable to interest expense.

Cash paid for taxes:

Income tax expense	$21,600
Less increase in income taxes payable	(12,000)
	$9,600

The treatment for taxes is the same as for interest. That is, any increase in the Income Tax Payable account would be subtracted from the expense to get to the total cash paid, and any decrease would be added. In this example, we owe $12,000 more this December 31st than we did last. Therefore, we will subtract the $12,000 from our Interest Tax Expense to get the total cash paid for taxes.

To sum up:

Cash flow from operations	
Cash collected from customers	$654,000
Cash paid to suppliers & for operating expenses	(553,000)
Cash paid for interest	(14,000)
Cash paid for taxes	(9,600)
	$ 77,400

Cash from Operations – Indirect Method

Under the Indirect Method, we start with the bottom line - Net Income. We then add back any non-cash items that may appear on the income statement. The most common of these are amortization expense and gains/losses on the sale of capital assets.

We then add or subtract any changes in the non-cash current asset and liability accounts. This would include changes in accounts receivable, inventory, as well as all current payable accounts. Increases (decreases) in current assets are cash outflows (inflows. Increases (decreases) in current liabilities are cash inflows (outflows).

Cash flow from Operations:	
Net Income	$ 67,400
Add back items not requiring a cash outlay	
Amortization expense	5,000
Adjust for non-cash working capital items:	
Increase in Accounts Receivable	(6,000)
Increase in Inventory	(2,000)
Decrease in Accounts Payable	(2,000)
Increase in Salaries Payable	2,000
Increase in Interest Payable	1,000
Increase in Taxes Payable	12,000
	$77,400

To continue the example, let's finish with the cash flow statement.

Cash from Investing Activities	
No activity	$ 0
Cash from Financing Activities	
Proceeds from issuance of Common Stock	30,000
Payment on Bonds Payable	(7,000)
Payment of Dividend*	(66,400)
	(43,400)
*Opening R/E + Net Income – Closing R/E = Dividends paid ($23,000 + 67,400 – 24,000 = 66,400)	
Net Change in Cash ($77,400 + 0 – 43,400)	34,000
Opening Cash Balance – December 31, 20x6	42,000
Ending Cash Balance – December 31, 20x7	$ 76,000

Definition of Cash

For purposes of the statement of cash flow, the term 'cash' is defined as 'cash and cash equivalents'. This includes cash, term deposits and any highly liquid assets (i.e. readily convertible to cash) subject to an insignificant risk of change in value.

Problems with Solutions

Problem 9-1

The following is the Income Statement and comparative Statement of Financial Position for Ginger's Cookies Ltd.

Ginger's Cookies Ltd.
Income Statement
for the Year ended December 31, 20x6

Sales Revenue		$750,000
Cost of Goods Sold		300,000
Gross Margin		450,000
Operating Expenses:		
Salaries expense		120,000
Amortization expense		7,000
Other		80,000
		207,000
Operating income		243,000
Interest expense	(32,000)	
Gain on Sale of Capital Assets	15,000	(17,000)
Net Income before taxes		226,000
Income tax Expense		79,100
Net Income		$146,900

Ginger's Cookies Ltd.
Comparative Unclassified Statement of Financial Position
as at December 31, 20x6

	20x6	**20x5**
ASSETS		
Cash	$ 20,500	$ 19,200
Accounts Receivable	90,000	80,000
Inventory	47,000	40,000
Capital assets	125,000	45,000
Less Accumulated amortization	(7,000)	(40,000)
	$275,500	$144,200
LIABILITIES		
Accounts Payable	$ 27,000	$ 14,800
Salaries Payable	10,000	2,400
Interest Payable	7,000	6,000
Taxes Payable	43,100	10,000
Bonds Payable	30,000	0
	117,100	33,200
SHAREHOLDERS' EQUITY		
Common Stock	50,000	50,000
Retained Earnings	108,400	61,000
	158,400	111,000
	$275,500	$144,200

Additional Information: on January 2, 20x6, the only piece of equipment, costing $45,000, was replaced by a new piece of machinery costing $125,000. Ginger's paid cash for the equipment.

Required –

a. Prepare a Statement of Cash Flow using the Direct Method.
b. Prepare the Operations section of the Statement of Cash Flow using the Indirect Method.

Problem 9-2

The comparative statements of financial position of McDuff Ltd. are shown below.

MCDUFF LTD.
Statement of Financial Position
December 31

	20x3	**20x2**
Current assets		
Cash	$ 319,000	$ 353,000
Accounts receivable	888,000	999,000
Merchandise inventory	1,093,000	1,045,000
Prepaid expenses	43,000	32,000
	2,343,000	2,429,000
Capital assets	5,711,000	5,326,000
Accumulated amortization	(3,842,000)	(3,695,000)
	1,869,000	1,631,000
	$ 4,212,000	$ 4,060,000
Current liabilities		
Accounts payable	$ 897,000	$ 909,000
Salaries and wages payable	82,000	119,000
Interest payable	30,000	35,000
Income taxes payable	45,000	28,000
	1,054,000	1,091,000
Bonds payable	1,000,000	1,500,000
Mortgage payable	800,000	450,000
	2,854,000	3,041,000
Shareholders' equity		
Common shares	850,000	700,000
Retained earnings	508,000	319,000
	1,358,000	1,019,000
	$ 4,212,000	$ 4,060,000

MCDUFF LTD.
Income Statement
For the year ended December 31, 20x3

Revenues		$4,500,000
Cost of goods sold		2,400,000
Operating expenses		700,000
Salaries and wages expense		850,000
Operating income		550,000
Gain on retirement of bonds payable	$ 13,000	
Loss on disposal of assets	(7,000)	
Interest expense	(67,000)	(61,000)
Net income before taxes		489,000
Income tax expense		250,000
Net income		$239,000

Additional information

1. On April 15, 20x3, McDuff sold capital assets that cost $158,000, with a book value of $87,000, for $80,000.
2. On August 31, 20x3, bonds with a net book value of $500,000 were retired for $487,000.
3. Amortization expense is included in Operating expenses.

Required -

a. Prepare a cash flow statement for the year ending December 31, 20x3. Use the indirect method to report the operating activities.
b. Prepare the cash flow from operations section using the direct method.

10. SOLUTION TO PROBLEMS

Problem 1-1

Part (a)

BALANCE SHEET

Assets

	Cash		
1	20,000	2,000	2
4	20,000	15,000	3
7	190,000	1,200	6
8	4,000	182,800	
B	**33,000**		

	Accts. Receivable		
7	6,000	4,000	8
B	**2,000**		

	Prepaid Rent		
2	1,000		

	Prepaid Insurance		
6	1,200	400	12
B	**800**		

	Inventory		
15	25,000		

	Furn. & Fixtures		
3	15,000		

	Acc. Amortization		
		500	11

Liabilities & Equity

	Accounts Payable		
10	130,000	50,000	5
14	15,000	120,000	9
		25,000	**B**

	Accrued Liabilities		
		150	13
		700	16
		600	17
		1,960	18
		5,367	19
		8,777	**B**

	Bank Loan		
		20,000	4

	Common Stock		
		20,000	1

	Retained Earnings		
10	10,000		

Expenses **INCOME STATEMENT** **Revenues**

Purchases				Purchase Returns				Sales		
5	50,000	170,000	15	15	15,000	15,000	14		196,000	7
9	120,000									
B	**0**					**0**	**B**			

Cost of Goods Sold		
15	130,000	

Rent		
2	1,000	
10	3,000	
18	1,960	
B	**5,960**	

Amortization		
11	500	

Interest		
10	300	
13	150	
B	450	

Wages and Salaries		
10	36,000	
17	600	
B	**36,600**	

Advertising		
10	2,000	

Insurance		
12	400	

Miscellaneous		
10	1,500	
16	700	
B	**2,200**	

Income Taxes		
19	5,367	

Journal Entries –

1.	Cash	$20,000	
	Common Stock		$20,000
2.	Prepaid rent	1,000	
	Rent expense	1,000	
	Cash		2,000
3.	Furniture and fixtures	15,000	
	Cash		15,000
4.	Cash	20,000	
	Bank Loan		20,000
5.	Purchases	50,000	
	Accounts Payable		50,000
6.	Prepaid Insurance	1,200	
	Cash		1,200
7.	Cash	190,000	
	Accounts receivable	6,000	
	Sales		196,000
8.	Cash	4,000	
	Accounts receivable		4,000
9.	Purchases	120,000	
	Accounts payable		120,000
10.	Wages and salaries	36,000	
	Rent	3,000	
	Advertising	2,000	
	Miscellaneous expenses	1,500	
	Retained earnings	10,000	
	Interest	300	
	Accounts payable	130,000	
	Cash		182,800
11.	Amortization expense	500	
	Accumulated amortization		500
	$15,000 / 10 years x 4/12		

12.	Insurance expense	400	
	Prepaid insurance		400
	$1,200 / 12 months x 4 months expired		
13.	Interest expense	150	
	Accrued liabilities		150
	Accrual for the month of October:		
	$20,000 x 9% x 1/12		
14.	Accounts payable	15,000	
	Purchase returns		15,000
15.	Cost of goods sold	130,000	
	Inventory	25,000	
	Purchase returns	15,000	
	Purchases		170,000
16.	Miscellaneous expenses	700	
	Accrued liabilities		700
17.	Salaries and wages	600	
	Accrued liabilities		600
18.	Rent expense	1,960	
	Accrued liabilities		1,960
	$196,000 x 1%		
19.	Income tax expense	5,367	
	Accrued liabilities		5,367
	Net income before taxes = $17,890		
	Income tax expense = $17,890 x 30% =		

b. *Heavenly Books, Inc.*
Trial Balance
As at October 31, 20x2

	Debit	*Credit*
Cash	$33,000	
Accounts receivable	2,000	
Inventory	25,000	
Prepaid Insurance	800	
Prepaid rent	1,000	
Furniture and fixtures	15,000	
Accumulated amortization		$ 500
Accounts payable		25,000
Accrued liabilities		8,777
Bank loan		20,000
Capital Stock		20,000
Retained earnings	10,000	
Sales		196,000
Cost of goods sold	130,000	
Rent	5,960	
Amortization	500	
Interest	450	
Wages and salaries	36,600	
Advertising	2,000	
Insurance	400	
Miscellaneous	2,200	
Income taxes	5,367	
	$270,277	$270,277

c. *Heavenly Books, Inc.*
Income Statement
for the four months ended October 31, 20x2

Sales	$196,000
Cost of goods sold	130,000
Gross profit	66,000
Operating expenses	
Rent	5,960
Amortization	500
Wages and salaries	36,600
Advertising	2,000
Insurance	400
Miscellaneous	2,200
	47,660
Operating income	18,340
Interest expense	450
Net income before taxes	17,890
Income tax expense	5,367
Net income	$12,523

Heavenly Books, Inc.
Statement of Retained Earnings
for the four months ended October 31, 20x2

Retained earnings, July 2, 20x2	$0
Net income	12,523
Dividends	(10,000)
Retained earnings, October 31, 20x2	$2,523

Heavenly Books, Inc.
Statement of Financial Position
as at October 31, 20x2

ASSETS		
Current Assets		
Cash		$33,000
Accounts receivable		2,000
Inventory		25,000
Prepaid insurance		800
Prepaid rent		1,000
		61,800
Furniture and fixtures	$15,000	
Less accumulated amortization	500	14,500
		$76,300
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities		
Accounts payable		$25,000
Accrued liabilities		8,777
Current portion of bank loan		12,000
		45,777
Bank loan		8,000
		53,777
Shareholders' Equity		
Capital stock		20,000
Retained earnings		2,523
		22,523
		$76,300

Problem 1-2

Global Productions Inc.
Income Statement
for year ended December 31, 20x6

Net sales ($157,600 – 2,400)		$155,200
Cost of goods sold		84,000
Gross margin		71,200
Operating expenses		
Amortization	4,800	
Insurance	2,300	
Rent	21,300	
Salaries	18,000	
Supplies	4,100	
Telephone	3,500	54,000
Operating income		17,200
Interest expense		3,600
Net income before taxes		13,600
Income tax expense		4,100
Net income		$9,500

Global Productions Inc.
Statement of Retained Earnings
for year ended December 31, 20x6

Retained Earnings - beginning	$0
Net income	9,500
Dividends	(2,100)
Retained Earnings - ending	$7,400

Global Productions Inc.
Statement of Financial Position
as at December 31, 20x2

ASSETS		
Current Assets		
Cash		$25,100
Accounts receivable		14,900
Inventory		44,200
Supplies		2,500
Prepaid insurance		1,100
		87,800
Office equipment	24,000	
Accumulated amortization	4,800	19,200
		$107,000
LIABILITIES AND SHAREHODLERS' EQUITY		
Current liabilities		
Accounts payable		$7,100
Salaries payable		1,500
Income taxes payable		1,000
		9,600
Bank loan		40,000
		49,600
Shareholders' Equity		
Capital Stock		50,000
Retained earnings		7,400
		57,400
		$107,000

Problem 1-3

a) Annual amortization expense for the machinery would be = $50,000/8 years = $6,250/year. However, you only had the machine in use for 7 months. Therefore, your amortization expense would be = $6,250 X 7/12 = $3,646 for the current period.

Amortization Expense	3,646	
Accumulated Amortization		3,646

b) When you received the cash in January, the full amount would be recorded as an Unearned Revenue liability.

Cash	24	
Unearned Revenue		24

As of April 30, you would have sent out 1 of the 4 magazines in the subscription. Therefore, you would have earned ¼ of the revenue. $24 X ¼ = $6. The journal entry would be:

Unearned Revenue	6	
Subscription Revenue		6

c) You have earned the $2,300 revenue this accounting period, therefore, it is appropriate for you to record it in this period. To do this you would set up a receivable, due from Big Al, in the amount of revenue earned during the period.

Accounts Receivable	2,300	
Consulting Revenue		2,300

d) As of Wednesday, you will have accumulated 3 days worth of salaries that have not been paid. However, as these expenses were incurred during the period, you must record them as an expense of that period. Therefore, we will record salaries expense and the accompanying salaries payable of $1,800.

Salary Expense	1,800	
Salaries Payable		1,800

e) When you purchased the policy, you would have debited Prepaid Insurance and credited Cash for the full amount of $5,000. You have used 8/12 of the policy, therefore you will remove $5,000 X 8/12 = 3,333 from Prepaid Insurance and record it as Insurance Expense for the period.

Insurance Expense	3,333	
Prepaid Insurance		3,333

f) Each of the payments for $6,000 covers a 6-month period. The first payment that you received on June 1st would cover the catering for June – November. Therefore, that full amount would have been earned and recorded as revenue during the period. No adjustment is needed for this. However, the second payment that you received on December 1st covers the period of December – May. On December 1st, you would have debited Cash and credited Unearned Revenue by $6,000 each. You will have to adjust for that fact that 5/6 of the payment has not been earned i.e. $6,000 X 5/6 = $5,000 is unearned, or $1,000 has been earned and should be included in revenue for this period..

Unearned Revenue	1,000	
Catering Revenue		1,000

g) The $4,750 you paid on June 30th represents Prepaid Rent, and would be recorded as an asset on your accounts for the June30th period end.

Prepaid Rent	4,750	
Cash		4,750

As of July 31st, you would have been in the premises for 1 month, and therefore you would have incurred one month worth of Rent Expense. You would remove the Prepaid Rent account to reflect that fact that you have "used up" the rent.

Rent Expense	4,750	
Prepaid Rent		4,750

Problem 1-4

a.	Dec 31, 20x5	Insurance expense	$250	
		Prepaid expense		$250
		$1,000 x 6/24 = $250		
b.	Dec 31, 20x5	Rent receivable (or accounts rec)	500	
		Rent income		500
c.	Dec 31, 20x5	Interest expense	100	
		Interest payable		100
		$300 x 4/12 = $100		
d.	Dec 31, 20x5	Unearned subscription revenues	55	
		Subscription revenues		55
		$440 x 3/24 = $55		

Problem 2-1

a.	Cash balance per books, Dec 1		$3,700
	Add cash received during December		77,000
	Less cash payments made during December		(77,548)
	Cash balance per books, Dec 31, before adjustments		3,152
	Less bank service charges		(52)
	Add error in recording cheque ($1,200 - $1,020)		180
	Adjusted cash balance per books, Dec 31		$3,280
	Cash balance per bank, December 31		$6,300
	Add Sparg cheque deducted in error		580
	Add deposits in transit		1,700
	Less outstanding cheques		(5,300)
	Cash balance per books		$3,280
b.	Cash	$180	
	Accounts receivable		$180
	Bank service charges	52	
	Cash		52

Problem 3-1

a.	Allowance for doubtful accounts	$55,000	
	Accounts receivable		$55,000
	Accounts receivable	3,000	
	Allowance for doubtful accounts		3,000
	Cash	3,000	
	Accounts receivable		3,000
b.	Bad debt expense ($14,200,000 x 0.5%)	71,000	
	Allowance for doubtful accounts		71,000
c.	Accounts receivable balance, December 31, 2004:		
	$1,000,000 Beg Bal + 14,200,000 Credit Sales		
	– 11,900,000 Collections – 55,000 Write-offs		$3,245,000
			x 3%
	Allowance for doubtful accounts, Dec 31, 2004		$97,350 cr.
	Balance in allowance before adjustment		
	$63,000 cr. Beg Bal + 55,000 dr. Write-Offs		
	+ 3,000 cr. Recoveries		11,000 cr.
	Adjustment required		$86,350 cr.
	Bad debt expense	86,350	
	Allowance for doubtful accounts		86,350

Problem 3-2

20x0	Accounts receivable	$2,800,000	
	Sales		$2,800,000
	To record credit sales for 20x0		
	Cash	2,400,000	
	Accounts receivable		2,400,000
	To record cash collections for 20x0		
	Allowance for doubtful accounts	16,000	
	Accounts receivable		16,000
	To record accounts written off for 20x0		
	Bad debt expense	43,480	
	Allowance for doubtful accounts		43,480
	To adjust the allowance for doubtful accounts to an ending balance of $27,840 cr. (Schedule)		
20x1	Accounts Receivable	3,000,000	
	Sales		3,000,000
	To record credit sales for 20x1		
	Cash	2,915,000	
	Accounts receivable		2,915,000
	To record cash collections for 20x1		
	Allowance for doubtful accounts	27,000	
	Accounts receivable		27,000
	To record accounts written off for 20x1		
	Accounts receivable	7,000	
	Allowance for doubtful accounts		7,000
	To record recoveries for 20x1		
	Cash	7,000	
	Accounts receivable		7,000
	To record cash collections for 20x1		
	Bad debt expense	31,290	
	Allowance for doubtful accounts		31,290
	To adjust the allowance for doubtful accounts to an ending balance of $38,770 cr. (Schedule)		

	Accounts Receivable			Allowance for Doubtful Accounts		
20x0	2,800,000	2,400,000		16,000	43,480	**20x0**
		16,000				
Bal	384,000				27,480	Bal
20x1	3,000,000	2,915,000		27,000	7,000	**20x1**
	7,000	27,000			30,930	
		7,000				
Bal	442,000				38,770	Bal

Schedule – Calculation of the Allowance for Doubtful Accounts

December 31, 20x0 -			
0 – 30	$234,000	1%	$ 2,340
31 – 60	90,000	5%	4,500
61 – 90	45,000	20%	9,000
Over 90	15,000	80%	12,000
	$384,000		$27,840
December 31, 20x1 -			
0 – 30	$277,000	1%	$ 2,770
31 – 60	80,000	5%	4,000
61 – 90	60,000	20%	12,000
Over 90	25,000	80%	20,000
	$442,000		$38,770

Problem 4-1

a.	Accounts receivable	$80,000	
	Sales		$80,000
	Cost of goods sold ($80,000 x 70%)	56,000	
	Inventory		56,000
b.	Delivery expense	1,200	
	Cash		1,200
c.	Sales returns and allowances	500	
	Accounts receivable		500
	Inventory ($500 x 70%)	350	
	Cost of goods sold		350
	Cash ($79,500 x 98%)	77,910	
	Sales discounts	1,590	
	Accounts receivable		79,500
d.	Inventory	50,000	
	Accounts payable		50,000
e.	Accounts payable	50,000	
	Cash ($50,000 x 99%)		49,500
	Inventory		500

Problem 4-2

a. Ending inventory = 55 units

(35 units x $12.00) + (20 units x $11.50) = $650
Note that the results for FIFO periodic are the same as for FIFO perpetual.

b.

	Purchases (Sales)			*Balance*		
Date	*Units*	*Unit Cost*	*Total Cost*	*Units*	*Unit Cost*	*Total Cost*
May 1				30	$10.00	$300
May 5	60	$11.50	$690	90	11.00	990
May 14	(20)	11.00	(220)	70		770
May 21	35	12.00	420	105	11.3333	1,190
May 29	(50)	11.3333	(567)	55		623

c.

Accounts receivable	$1,100	
Sales		$1,100
Cost of goods sold	560	
Inventory		560

(10 units x $10) + (40 units x $11.50)

Problem 4-3

a. Ending balance = 1,500 units

1,500 units x $23 = $34,500

b.

	Purchases (Sales)			*Balance*		
Date	*Units*	*Unit Cost*	*Total Cost*	*Units*	*Unit Cost*	*Total Cost*
Jan 1				1,000	$12.00	$12,000
Feb 5	2,000	18.00	36,000	3,000	16.00	48,000
Feb 20	(2,500)	16.00	(40,000)	500		8,000
Apr 2	3,000	23.00	69,000	3,500	22.00	77,000
Nov 4	(2,000)	22.00	44,000	1,500		33,000

Problem 5-1

a.		Amortization expense	$12,000	
		Accumulated amortization		$12,000
		($65,000 – 5,000) / 5 years		
b.	20x7	Amortization expense	26,000	
		Accumulated amortization		26,000
		$65,000 x 40% (1/5 x 2 = 40%)		
	20x8	Amortization expense	15,600	
		Accumulated amortization		15,600
		($65,000 – 26,000) x 40%		
c.		Amortization expense	16,500	
		Accumulated amortization		16,500
		($65,000 – 5,000) / 200,000 x 55,000		
d.		Net book value = $65,000 – 12,000 = $53,000		
		Amortization expense for 20x8 = ($53,000 – 2,000) / 3 = $17,000		
		Amortization expense	17,000	
		Accumulated amortization		17,000

Problem 5-2

(a)	Jan 2, 20x3	Equipment	$60,000	
		Cash		$60,000
	Dec 31, 20x3	Amortization expense	10,000	
		Accumulated amortization		10,000
		(60,000 – 10,000) / 5		
	Aug 31, 20x4	Repairs and maintenance expense	600	
		Cash		600
	Dec 31, 20x4	Amortization expense	10,000	
		Accumulated amortization		10,000
	Apr 31, 20x5	Equipment	2,000	
		Cash		2,000
	Dec 31, 20x5	Amortization expense	10,500	
		Accumulated amortization		10,500
		Original amount + amortization on amount capitalized on April 31, 20x5: $2,000 / 32 months remaining = $62.50 / month x 8 months = $500 + 10,000 = $10,500		
	Dec 31, 20x6	Amortization expense	10,750	
		Accumulated amortization		10,750
		$10,000 + ($62.50 x 12 months)		
	Oct 31, 20x7	Equipment	20,000	
		Cash		20,000
	Dec 31, 20x7	Amortization expense	12,763	
		Accumulated amortization		12,763
		See Schedule 1		
	Aug 31, 20x7	Amortization expense	12,536	
		Accumulated amortization		12,536
		$1,567 x 8 months		
		Cash	25,000	
		Accumulated amortization	66,549	
		Equipment		122,000
		Gain on disposal		30,451

Schedule 1 *Amortization expense for 20x7 -*

Net book value of asset at Sep 30, 20x7 -	
Original cost of asset	$100,000
Capitalization made on April 1, 20x5	2,000
Less Amortization expense	
20x3	(10,000)
20x4	(10,000)
20x5	(10,500)
20x6	(10,750)
20x7 to Sep 30: $10,750 x 9/12	(8,062)
	$52,688

Amortization expense – Sep 30 to Dec 31, 20x7
($52,688 + 20,000 – 10,000) / 40 months
= $1,567 per month x 3 months = $4,701

Total amortization expense for 20x7 = $8,062 + 4,701 = $12,763

Problem 6-1

The premium expense would calculated as follows:

$375,000 /10 coupons /15 redemption ratio x $25 x 55% = $34,375

The journal entry to record the premium expense would be:

Premium Expense	34,375	
Premium Liability		34,375

The journal entry to record the actual costs incurred during the year would be:

Premium Liability ((22,500/15) x $25/card)	37,500	
Cash		37,500

Problem 6-2

The journal entry to record warranty expense is:

Warranty expense ($3,000,000 x 5%)	$150,000	
Warranty Liability		$150,000

The journal entry to record actual warranty costs incurred is:

Warranty Liability	130,000	
Cash, A/P, Inventory		130,000

The warranty liability at the end of the year will be $165,000 $^{\text{Opening Balance}}$ + 150,000 $^{\text{Warranty Expense}}$ – 130,000 $^{\text{Warranty Costs Incurred}}$ = $185,000.

Problem 6-3

The value of the bond issue will be as follows:

	N	I/Y	PV	PMT	FV
Enter	10	4		25000	500000
Compute			X = 540,554		

The journal entry to record the issuance of these bonds is as follows:

July 1, 20x1	Cash	$540,554	
	Bonds payable		$540,554

The journal entry to record the interest payments using the effective interest method of amortization is as follows:

Dec 31, 20x1	Interest expense (540,554 x 4%)	21,622	
	Bonds payable	3,378	
	Cash		25,000

The journal entry to record the interest payment of Jun 30, 20x2 would be as follows:

Jun 30, 20x2	Interest expense (540,554 - 3,378) x 4%	21,487	
	Bonds payable	3,513	
	Cash		25,000

Problem 6-4

PV of bond issue:
N = 30, I = 4, PMT = 425,000, FV = 10,000,000, Solve for PV = $10,432,301

Dec 31, 20x4	Cash	$10,432,301	
	Premium on Bonds Payable		$432,301
	Bonds payable		10,000,000
Jun 30, 20x5	Interest expense ($10,432,301 x 4%)	417,292	
	Premium on Bonds Payable	7,708	
	Cash		425,000
Dec 31, 20x5	Interest expense*	416,984	
	Premium on Bonds Payable	8,016	
	Cash		425,000

* (10,432,301 – 7,708) x 4%

Problem 7-1

1.	February 2	Cash	126,000	
		Common Shares		126,000
	February 10	Patent	40,000	
		Preferred Shares		40,000
	February 15	No entry		
	February 26	Cash	12,000	
		Common Shares		12,000
	February 27	Dividends or R/E	2,400	
		Cash		2,400
	February 28	Dividends or R/E	14,080	
		Cash		14,080
		Number of common shares:		
		Issued on Feb 2		21,000
		Stock Split on Feb 15		21,000
		Issues on Feb 26		2,000
				44,000
				x $0.32
				$14,080

2. ***Shareholders' Equity -***

Common Shares, 44,000 shares issued and outstanding	$ 138,000
Preferred Shares, $6, non cumulative, 400 shares issued and outstanding	40,000
Retained Earnings ($0 + $56,000 - $2,400 - $14,080)	39,520
Total Shareholders' Equity	$217,520

Problem 7-2

1.	a.	Cash	$115,000	
		Common Shares		$115,000
	b.	Equipment	40,000	
		Preferred shares		40,000
	c.	Cash	20,000	
		Preferred shares		20,000
	d.	Dividends (or Retained Earnings)	3,000	
		Preferred Dividends Payable		3,000
	e.	Cash	180,000	
		Common shares		180,000
	f.	Preferred Dividends Payable	3,000	
		Cash		3,000
	g.	Retained earnings	12,500	
		Cash		12,500
	h.	Bonds payable	50,000	
		Premium on bonds payable	3,000	
		Common shares		53,000

2. ***Shareholders' Equity -***

Common Shares, authorized 100,000, issued and outstanding 3,000	$348,000
Preferred Shares, cumulative – authorized 50,000, issued and outstanding 3,000	60,000
Retained Earnings ($64,000 Net Income – 15,500 Dividends)	48,500
	$456,500

Problem 8-1

a.	1.	Accounts receivable	$1,600,000	
		Sales		$1,600,000
	2.	Cash	1,520,000	
		Accounts receivable		1,520,000
	3.	Allowance for doubtful accounts	34,000	
		Accounts receivable		34,000
	4.	Accounts receivable	5,000	
		Allowance for doubtful accounts		5,000
		Cash	5,000	
		Accounts receivable		5,000
	5.	Purchases	960,000	
		Accounts payable		960,000
	6.	Accounts Payable	16,000	
		Purchase returns		16,000
	7.	Cash	75,000	
		Common stock		75,000
	8.	Accounts payable	945,000	
		Cash		945,000
	9.	Salaries payable	5,600	
		Salaries expense	314,400	
		Cash		320,000
	10.	Interest expense ($419,600 x 3%)	12,588	
		Bonds payable	412	
		Cash ($400,000 x 6.5% / 2)		13,000
		Interest expense ($419,600 – 412) x 3%	12,576	
		Bonds payable	424	
		Cash ($400,000 x 6.5% / 2)		13,000
	11.	Equipment	30,000	
		Cash		30,000
	12.	Warranty liability	25,000	
		Cash		25,000

13.	Income taxes payable	40,000	
	Cash		40,000
14.	Common shares (1,000 x $17.31*)	17,310	
	Retained earnings	4,690	
	Cash		22,000
	* Average book value per share		
	= $150,000 + 75,000 / (10,000 + 3,000)		
	= $17.31		
15.	Prepaid insurance	2,400	
	Cash		2,400
16.	Operating expenses	130,000	
	Cash		130,000
17.	Bad debt expense	23,930	
	Allowance for doubtful accounts		23,930
	The balance in the allowance for doubtful accounts is: $23,000 cr. + 34,000 dr. + 5,000 cr. =		$6,000 dr.
	The balance in the allowance for doubtful accounts should be:		
	$144,000 x 3%	$4,320	
	43,000 x 7%	3,010	
	23,000 x 20%	4,600	
	12,000 x 50%	6,000	17,930 cr.
	Bad debt expense		$23,930 dr.
18.	Insurance expense	3,400	
	Prepaid insurance		3,400
	Balance in prepaid insurance account:		
	$1,400 + 2,400		$3,800
	Balance required: $2,400 x 2/12		400
	Insurance expense		$3,400

19.	Amortization expense	39,150	
	Acc. amortization – building*		7,500
	Acc. amortization – equipment**		27,400
	Patents***		4,250
	* $300,000 / 40 = $7,500		
	** ($145,000 – 38,000 NBV Beg + 30,000 Purchase) = $137,000 x 20% = $27,400		
	*** $34,000 / 8 = 4,250		
20.	Cost of goods sold	886,000	
	Inventory ($378,000 – 320,000)	58,000	
	Purchase returns	16,000	
	Purchases		960,000
	Check:		
	Opening inventory		$320,000
	Purchases – net ($960,000 – 16,000)		944,000
	Cost of goods available for sale		1,264,000
	Less ending inventory		(378,000)
	Cost of goods sold		$886,000
	Inventory loss	13,000	
	Allowance for decline in value of inventory		13,000
21.	Warranty expense	24,000	
	Warranty liability		24,000
	$1,600,000 x 1.5%		
22.	Salaries expense	6,700	
	Salaries payable		6,700
23.	Retained earnings	80,000	
	Cash		80,000
24.	Income tax expense	53,702	
	Income taxes payable		53,702
	$134,256 x 40% = 53,702		

Part (b)

Assets

Cash

B	36,000	945,000	8
2	1,520,000	320,000	9
4	5,000	13,000	10
7	75,000	13,000	10
		30,000	11
		25,000	12
		40,000	13
		22,000	14
		2,400	15
		130,000	
		80,000	23
E	15,600		

Prepaid Insurance

B	1,400	3,400	18
15	2,400		
E	400		

Building

B	300,000		

Equipment

B	145,000		
11	30,000		
E	175,000		

Patents

B	34,000	4,250	19
E	29,750		

BALANCE SHEET

Accts Receivable

B	176,000	1,520,000	2
1	1,600,000	34,000	3
4	5,000	5,000	4
E	222,000		

Allow/Doubt Accts

3	34,000	23,000	B
		5,000	4
		23,930	17
		17,930	E

Inventory

B	320,000		
20	58,000		
E	378,000		

Land

B	40,000		

Acc Amort - Bldg

		120,000	B
		7,500	19
		127,500	E

Acc Amort - Equip

		38,000	B
		27,400	19
		65,400	

Allowance for Decline in Value of Inventory

		13,000	20

Liabilities & Equity

Accounts Payable

6	16,000	127,000	B
8	945,000	960,000	5
		126,000	

Salaries Payable

9	5,600	5,600	B
		6,700	22
		6,700	E

Inc Taxes Payable

13	40,000	12,000	B
		53,702	24
		25,702	

Warranty Liability

12	25,000	13,000	B
		24,000	21
		12,000	

Bonds Payable

10	412	419,600	B
10	424		
		418,764	

Common Stock

14	17,310	150,000	B
		75,000	7
		207,690	E

Retained Earnings

14	4,690	144,200	B
23	80,000		
		59,510	E

	Expenses			INCOME STATEMENT			Revenues	
	Purchases				Purchase Returns			Sales
5	960,000	960,000	20	20	16,000	16,000	6	1,600,000 1
	Cost of Goods Sold				Salaries			
20	886,000			9	314,400			
				22	6,700			
				E	321,100			
	Interest				Warranty expense			
10	12,588			21	24,000			
10	12,576							
E	25,164							
	Insurance				Operating expenses			
18	3,400			16	130,000			
	Bad Debt Expense				Amortization exp.			
17	23,930			19	39,150			
	Income Tax Exp.				Inventory Loss			
24	53,702			20	13,000			

c. ***Haider Corporation***
Trial Balance
As at December 31, 20x6

	Dr.	***Cr.***
Cash	$15,600	
Accounts receivable	222,000	
Allowance for doubtful accounts		$17,930
Inventory	378,000	
Allowance for decline in value of inventory		13,000
Prepaid insurance	400	
Land	40,000	
Building	300,000	
Accumulated amortization – building		127,500
Equipment	175,000	
Accumulated amortization – equipment		65,400
Patents	29,750	
Accounts payable		126,000
Salaries payable		6,700
Income taxes payable		25,702
Warranty liability		12,000
Bonds payable		418,764
Common stock		207,690
Retained Earnings		59,510
Sales		1,600,000
Cost of goods sold	886,000	
Salaries	321,100	
Interest	25,164	
Warranty expense	24,000	
Insurance expense	3,400	
Operating expenses	130,000	
Bad debt expense	23,930	
Amortization expense	39,150	
Inventory loss	13,000	
Income tax expense	53,702	
	$2,680,196	$2,680,196

d. *Haider Corporation*
Income Statement
for the year ended December 31, 20x6

Sales	$1,600,000
Cost of goods sold	886,000
Gross profit	714,000
Operating expenses	
Salaries	321,100
Warranty	24,000
Insurance	3,400
Bad debts	23,930
Inventory loss	13,000
Amortization	39,150
Other operating expenses	130,000
	554,580
Operating income	159,420
Interest expense	25,164
Net income before taxes	134,256
Income tax expense	53,702
Net income	$80,554

Haider Corporation
Statement of Retained Earnings
for the year ended December 31, 20x6

Retained earnings, January 1, 20x6	$144,200
Net income	80,554
Premium on redemption of common shares	(4,690)
Dividends	(80,000)
Retained earnings, December 31, 20x6	$140,064

Haider Corporation
Statement of Financial Position
as at December 31, 20x6

ASSETS		
Current Assets		
Cash		$ 15,600
Accounts receivable		204,070
Inventory		365,000
Prepaid insurance		400
		585,070
Land		40,000
Building	$300,000	
Less accumulated amortization	(127,500)	172,500
Equipment	175,000	
Less accumulated amortization	(65,400)	109,600
Patents – net		29,750
		351,850
		$936,920
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities		
Accounts payable		$126,000
Salaries payable		6,700
Income taxes payable		25,702
Warranty liability		12,000
		170,402
Bonds payable		418,764
		589,166
Shareholders' Equity		
Capital stock		207,690
Retained earnings		140,064
		347,754
		$936,920

Problem 8-2

a.	Bad debt expense	$9,600	
	Allowance for doubtful accounts		$9,600
	$320,000 x 3%		
b.	Wages expense	4,800	
	Wages payable		4,800
c.	Insurance expense	3,600	
	Prepaid insurance		3,600
	$9,600 x 9/24		
d.	Amortization expense	7,600	
	Accumulated Amortization		7,600
	($80,000 – 4,000) / 10		
e.	Prepaid rent	4,000	
	Rent expense		4,000
	$9,600 x 5/12		
f.	Interest receivable	360	
	Interest revenue		360
	$12,000 x 9% x 4/12		
g.	Interest expense	4,500	
	Interest payable		4,500
	$60,000 x 10% x 9/12		
h.	Amortization expense ($11,900 / 17)	700	
	Patents or Accumulated Amortization – Patents		700
i.	Supplies inventory	4,700	
	Supplies expense		4,700
	Increase in inventory = $9,200 – 4,500		
j.	Warranty expense	12,000	
	Warranty liability		12,000
	10,000 x 3% x $40		
k.	Allowance for doubtful accounts	16,000	
	Accounts receivable		16,000
l.	Income tax expense	24,000	
	Income taxes payable		24,000

Problem 9-1

a. *Ginger's Cookies Ltd.*
Statement of Cash Flow
for the Year ended December 31, 20x6

Cash flow from operations	
Cash collected from customers ($7500,000 Sales - 10,000 Increase in A/R)	$740,000
Cash paid out to suppliers ($300,000 COGS + 7,000 Increase in Inventory - 12,200 Increase in AP)	(294,800)
Cash paid out for salaries ($120,000 Salaries Expense - 7,600 Increase in Salaries Payable)	(112,400)
Cash paid out for other operating expenses	(80,000)
Cash paid out for interest ($32,000 Interest expense - 1,000 Increase in Interest Payable)	(31,000)
Cash paid out for income taxes ($79,100 Income tax expense – 33,100 Increase in Income Taxes Payable)	(46,000)
	175,800
Cash flow from investing	
Proceeds on sale of equipment (Note 1)	20,000
Purchase of equipment	(125,000)
	(105,000)
Cash flow from financing	
Issue of bonds payable	30,000
Dividends paid (Note 2)	(99,500)
	(69,500)
Increase in cash ($175,800 – 105,000 – 69,500)	1,300
Cash, beginning	19,200
Cash, ending	$20,500

Note 1 – Proceeds on sale of equipment

Net book value of equipment ($45,000 – 40,000)	$ 5,000
Gain on sale	15,000
Proceeds	$20,000

Note 2 – Dividends paid

Net income	$146,900
Less increase in Retained Earnings ($108,400 – 61,000)	47,400
	$ 99,500

b. *Cash flow from operations – indirect*

Net income	$146,900
Adjust for noncash items	
Amortization expense	7,000
Gain on sale of capital assets	(15,000)
Adjust for changes in noncash working capital items	
Increase in Accounts Receivable	(10,000)
Increase in Inventory	(7,000)
Increase in Accounts Payable	12,200
Increase in Salaries Payable	7,600
Increase in Interest Payable	1,000
Increase in Income Taxes Payable	33,100
	$175,800

Problem 9-2

a. *McDuff Ltd.*
Statement of Cash Flow
for the year ended December 31, 20x3

Cash flow from operations	
Net income	$239,000
Adjust for non-cash items:	
Amortization expense[1]	218,000
Gain on retirement of bonds	(13,000)
Loss on disposal of assets	7,000
Adjust for changes in non-cash working capital items:	
Decrease in accounts receivable	111,000
Increase in merchandise inventory	(48,000)
Increase in prepaid expenses	(11,000)
Decrease in accounts payable	(12,000)
Decrease in salaries and wages payable	(37,000)
Decrease in interest payable	(5,000)
Increase in income taxes payable	17,000
	466,000
Cash flow from investing	
Proceeds on sale of assets	80,000
Purchase of capital assets[2]	(543,000)
	(463,000)
Cash flow from financing	
Redemption of bonds payable	(487,000)
Proceeds on issue of mortgage payable	350,000
Proceeds on issue of common shares	150,000
Cash dividends paid[3]	(50,000)
	(37,000)
Decrease in cash	(34,000)
Cash, beginning of year	353,000
Cash, end of year	$319,000

[1]

Accumulated Amortization, beginning of year	$3,695,000
Amortization expense	?
Accumulated Amortization on disposal: $158,000 – 87,000	(71,000)
Accumulated Amortization, end of year	$3,842,000

Amortization expense = $218,000

[2] Capital Assets, beginning	$5,326,000
Additions	?
Disposals	(158,000)
Capital Assets, ending	$5,711,000

Additions to capital assets = $543,000

[3] Retained Earnings, beginning of year	$319,000
Add net income	239,000
Less dividends	?
Retained Earnings, end of year	$508,000

Dividends = $50,000

b. Cash flow from operations – Direct

Cash collected from customers ($4,500,000 Sales + 111,000 Decrease in A/R)	$4,611,000
Cash paid out to suppliers ($2,400,000 COGS + 48,000 Increase in Inventory + 12,000 Decrease in AP)	(2,460,000)
Cash paid out for operating expenses ($700,000 – 218,000 Amortization Expense + 11,000 Increase in Prepaid Expenses)	(493,000)
Cash paid out for salaries and wages ($850,000 Salaries and Wages Expense + 37,000 Decrease in Salaries and Wages Payable)	(887,000)
Cash paid out for interest ($67,000 Interest expense + 5,000 Decrease in Interest Payable)	(72,000)
Cash paid out for income taxes ($250,000 Income tax expense – 17,000 Increase in Income Taxes Payable)	(233,000)
	$466,000