CHAPTER 2

ANALYZING CHANGES IN THE ACCOUNTING EQUATION

$$A = L + OE$$

economic resources

claims of creditors

claim of owner(s)

Topic 1 Terminology

Business Transaction - a financial event that affects assets, liabilities or owner's equity

simply means the event is expressed in terms of dollars or money

Drawings : a subelement decreasing owner's equity and resulting from the owner's withdrawal of assets for personal use.

Topic 2 - ANALYZING AN EXPANDED EQUATION

New Terms:

Revenue

Commissions

Expenses

Net Income

Net Loss

Topic 2 - Analyzing an Expanded Equation

- The primary purpose of a business is to increase the owner's equity by earning a profit over a specified period of time.

Revenue and Expense Transactions: financial events that determine the profit (or loss) of a business.

We will begin by analyzing revenue transactions

Revenue & Expenses show up under the Owner's Equity section.

Revenue will increase OE
Expenses will decrease OE

Cash ↑

REVENUE - an inflow of assets resulting from the sale of goods or services

COMMISSIONS - the fees a business charges for buying or selling goods for example, real estate for clients (Form of Revenue)

Transaction 8. We will continue with J. Emery Real Estate

As at Oct. 31, J. Emery Real Estate has received $26800 in cash, referred to as commission, for buying and selling homes, land and other forms of real estate for clients.

ASSETS					=	LIABILITIES		+	OWNER'S EQUITY		
Cash		Auto-mobile		Furniture		Office Equipment	=	Bank Loan Payable	Accounts Payable	+	J.Emery, Capital	J. Emery, Drawing

Cash		Auto-mobile		Furniture		Office Equipment		Bank Loan Payable		Accounts Payable		J.Emery, Capital		J. Emery, Drawing
$51000	+	$15000	+	$9000	+	$8000	=	$16000	+	$6000	+	$63000	-	$12000
26800														
77800		15000		9000		8000								

$26800 must be shown on the right side of the equation but where?

A commission represents revenue earned for the business and a new heading REVENUE is added to the accounting equation. Owner's Equity increases and the accounting equation is balanced.

ASSETS = LIABILITIES + OWNER'S EQUITY

Cash		Auto-mobile		Furniture		Office Equipment		Bank Loan Payable		Accounts Payable		J.Emery, Capital		J. Emery, Drawing	Revenue
$51000	+	$15000	+	$9000	+	$8000	=	$16000	+	$6000	+	$63000	-	$12000	
26800															$ 26800
77800		15000		9000		8000		16000		6000		63000		-12000	26800

$\underbrace{77800 \quad 15000 \quad 9000 \quad 8000}_{109800}$

$\underbrace{16000 \quad 6000}_{22000}$

$\underbrace{63000 \quad -12000 \quad 26800}_{77800}$

$\underbrace{22000 \quad 77800}_{109800}$

109800 = 109800

revenue

TRANSACTION 9 - On October 31st, J. Emery Real Estate earned commissions on credit by providing real estate services as follows: $6000 for selling a building for Pat Rogers, $4000 for selling a residence for R. Scobie and $15000 for buying properties for Shannon Development Co. All clients were given 30 days in which to pay the commissions.

4000 + 6000 + 15000 = 25000

Cash	Accounts Rec	Auto-mobile	Furniture	Office Equipment		Bank Loan Payable	Accounts Payable	J.Emery, Capital	J. Emery, Drawing	Revenue
$77800 +		+ $15000 +	$9000 +	$8000	=	$16000 +	$6000 +	$63000 -	$12000 +	$26800
	25000									25000
77800	25000	15000	9000	8000		16000	6000	63000 -	12000	51800

124 800

22000

102800

Accounts Receivable: an asset representing amounts due from customers.

We could say the business has claims on the property of these customers until their debts are paid.

Revenues increase cash or A/R

Does the inflow of cash automatically mean revenue has been earned by the business ???

Here are some examples.

1. The inflow of cash resulting from a customer's paying a debt means an increase in one asset, Cash, and a decrease in another asset Acc. Rec

2. When a business gets cash from a bank, this inflow of cash is offset by an increase in liabilities - usually in the form of a demand note payable to the bank.

When is Revenue Recognized?
- should it be recognized at the time the sale is made, or when the cash is received from the customer (accounts receivable)?

GAAPs (Broad accounting rules and guidelines)

Revenue Principle tells that revenue must be recognized as at the time of the sale of goods, or at the time of the rendering of service.

REVENUE PRINCIPLE: defines revenue, measures revenue and recognizes revenue.

Here are two rules to remember when revenue is recognized as being earned:

1. In <u>cash sales transactions</u> sales revenue is earned as at the time when the good or service is received by the buyer and cash is received by the seller.
2. In <u>credit sales</u>, revenue is normally recognized as at the time of the sale of goods or as at the time of the rendering c services, and when a sales invoice is available showing credit terms.

accounts receivable

Revenue/Commission → increase cash or accounts receivable and increase owner's equity (revenue column)

Analyzing Expense Transactions

- all businesses have expenses, and for one reason only - to support the activities that create revenue.

Expenses are the costs of the goods or services used up by a business to earn revenue

The costs can be for goods or services

Examples of Expenses:
Salaries and Wages
Monthly Rent
Telephone
Advertising

Expenses → Decrease Cash or Increase accounts payable and owner's equity will decrease.

Expenses: costs incurred by a business in earning revenue

2 Main Questions to Ask to Recognize An Accounting Expense

1.) Was the cost incurred (or used up) to earn revenue or to assist in revenue-making activities during a specified time period.

2.) Does the cost reduce owner's equity in the accounting equation as well as reducing an asset or increasing a liability.

Transaction 10 - to create revenue, J. Emery Real Estate incurred several expenses. The business paid a total of $6735 in cash as of Oct.31 for the following: Rent, $1600; Salaries, $4500; Utilities, $595 and Telephone, $40

Cash		Accounts Rec		Auto-mobile		Furniture		Office Equip.		Bank Loan Payable		Accounts Payable		J.Emery, Capital		J. Emery, Drawing		Revenue
$77800	+	$25000	+	$15000	+	$9000	+	$8000	=	$16000	+	$6000	+	$63000	-	$12000	+	$51800
-6735																		

There is a decrease of $6735 on the left side of the equation because cash is decreased.

Some element on the right side must decrease by a similar amount. What element is it?

Liabilities - No - because all of the expenses were paid in cash

Owner's Equity - Yes - but which?

J. Emery, Capital
J. Emery, Withdrawal
Revenue

None of these are correct why?

J. Emery, Capital - shows an increase through owner's investment

J. Emery, Withdrawal - shows a decrease to owner's equity through withdrawal of assets for the owner's personal use

Revenue - shows an increase to owner's equity through the inflow of cash and credit received from sales.

How can we record the decrease in owner's equity?
- by introducing a new headingEXPENSES

Assets					Liabilities		Owner's Equity			
Cash	Accts Rec	Auto-mobile	Furn.	Office Equip.	Bk Loan Payable	Accts Pay	J.Emery, Capital	J. Emery, Drawing	Revenue	Expenses
$77800	+ $25000	+ $15000	+ $9000	+ $8000	= $16000	+ $6000	+ $63000	- $12000	+ $51800	
-6735										-6735
$71065	+ $25000	+ $15000	+ $9000	+ $8000	= $16000	+ $6000	+ $63000	- $12000	+ $51800	- $6735

$128065 = $22000 + $106065

Note: The minus sign for expenses simply shows that this item causes a decrease to owner's equity in the accounting equation.

Transaction 11 - On October 31, J. Emery receives a bill for $2000 from The City Record, a local newspaper, for running three advertisements at different times in October. The bill states that J. Emery Real Estate has a period of 30 days in which to pay. (credit sale)

Assets					Liabilities		Owner's Equity			
Cash	Accts Rec	Auto-mobile	Furn.	Office Equip.	Bk Loan Payable	Accts Pay	J.Emery, Capital	J. Emery, Drawing	Revenue	Expenses
$71065 +	$25000 +	$15000 +	$9000 +	$8000 =	$16000 +	$6000 +	$63000 -	$12000 +	$51800 -	$6735
						+2000				-2000
71065	25000	15000	9000	8000	16000	8000	63000	-12000	51800	-8735

GAAP's Expense Principle for recognizing expenses. Just as revenue was recognized as at a point of sale in an earlier section, the expense principle for recognizing expenses is:

Expenses must be recognized and recorded when they are incurred.

Expense principle: defines expense, measures expense, and recognizes expense

Does it matter when the expenses are paid for?

Why?

expenses must be recognized as soon as they are incurred because they directly offset the earning of revenue within the same time period.

Remember:

- Revenue is the inflow of cash and accounts receivable. (Cash ↑ , A/R ↑)

- Expenses use up economic resources, or result in the outflow of assets (Cash ↓ , A/P ↑)

MATCHING REVENUE AND EXPENSES'

After accounting for revenue and expenses for a definite time period, for example one month, you subtract the total expenses from the total revenue earned to calculate the profit or loss for the period.

*** before you calculate you must make sure that revenues and expenses are <u>matched</u> for a specific time period.

Examples - to help understand the principle of matching - a GAAP

#1 Incorrect (December expenses are missing)

Revenues (for Oct., Nov. and Dec.)...............$15 000
Expenses (for Oct., Nov.)................................ 9 000
PROFIT ....$ 6 000

#2 Incorrect (6 mths vs 12 mths)

Revenues (for 6 months)..............$50 000
Expenses (for 12 months)............. 60 000
LOSS $10 000

#3 Correct

Revenues (for Sept 2009)............$10 000
Expenses (for Sept 2009)............. 4 000
NET PROFIT....................................$ 6 000

#4 Correct

Revenues (for Year 2009)............$150 000
Expenses (for Year 2009)............. 115 000
NET PROFIT....................................$ 35 000

Revenue > Expense (Net Profit)

#5 Correct

Revenues (for Year 2009)............$140 000
Expenses (for Year 2009)............. 160 000
NET LOSS ....$ 20 000

Revenue < Expense (Net Loss)

Based on the examples:

What is the matching principle?

In reporting the net profit or loss of a business for a financial period, revenues must be matched with their expenses.

MATCHING PRINCIPLE: revenues and expenses must be correlated to report the net income (net loss) for an accounting period.

- In other words revenues of a certain time period(called the financial or accounting period) must be matched with the related expenses incurred for that same period.

Note: the length of the time period can vary from one month, three months, six months or even a year.

Modern Term for Profit

previously we spoke of profit or loss, but in todays world we used the terms NET INCOME and NET LOSS. Going forward these are the terms you should use.

NET INCOME: the excess of revenue over expenses

NET LOSS: the excess of expenses over revenue

The word NET indicates that all revenues and all expenses have been reported and matched, for the same accounting period

APPLYING THE MATCHING PRINCIPLE TO THE ACCOUNTING EQUATION

- to apply the matching principle, you must rearrange the expanded section - revenue and expenses of the accounting equation by:
  - placing total expenses under total revenue
  - calculating the difference between the amounts and listing this as net income or net loss

Assets					Liabilities		Owner's Equity			
Cash	Accts Rec	Auto- mobile	Furn.	Office Equip.	Bk Loan Payable	Accts Pay	J.Emery, Capital	J. Emery, Drawing	$51800 - 6735 $43065	Revenue Expenses Net Income
$71065 +	$25000 +	$15000 +	$9000 +	$8000 =	$16000 +	$8000 +	$63000 -	$2000 +	$43065	

- Assume the matching principle has been verified
- Excess of revenue over related expenses is NET INCOME, a plus under OE
- OE will increase by the net income for the financial period.

If total expenses had exceeded the total revenue, the final result would have been a net loss (a minus amount). This would mean that the owner's equity for the period decreases by the amount of the loss.

In summary

- Revenue is the positive or plus part in calculating net income
- Expenses are the negative or minus part in calculating net income.
-The difference between the two will determine whether the owner's equity increases (net income) or decreases (net loss) as a result of the business transactions for a certain time period.

Owner's Equity

Capital		Drawing		Net Income	
				+$52 800	Revenue
				- 8 725	Expenses
$63000	-	$2000	+	$43 065	Increase

Owner's Equity

Capital		Drawing		Net Loss	
				+$51 800	Revenue
				- 80 000	Expenses
$63000	-	$2000	-	$28 200	Decrease

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Assets			= Liabilities	+ Owner's Equity		
Cash	Accts. Rec.	Equip. =	Bank Loan Payable	H.Chan, Capital	Revenue	Expenses
\$2510 +	\$1090 +	\$6400 =	\$1000 +	\$5000	+ \$8000	- \$4000

a.) Rearrange the equation to show the matching of revenues and expenses for Sept.

b.) Did this matching produce a net income or a net loss for the period? Explain

Concept Reinforcement

Page 44-45 Do P2-5, P2-6

Page 46 Do MC2-4, MC2-5 and MC2-6