Pre-reading

**Accounting?**

Businesses need to keep track of financial transactions for two reasons. First, it is important that the company keep control of its assets. The management of the company has what is known as a *fiduciary responsibility* to the owners. That means that they have to safeguard the assets of the company and generally run the company in a responsible manner. Part of this is know ing what you have, what you owe and so forth. Also, as part of the fiduciary responsibility, the management must report periodically to the owners to let them know how the business is doing.

The second reason to keep track of the business transactions is so that decisions can be made relating to the running of the business. Knowledge of the basics of recording transactions will not only assist you in making decisions, it will also give you the tools to forecast the financial effects of those decisions.

So what are we trying to do when we say we are *doing accounting*? First we are keeping track of the things a company owns and where those things come from, or who has claims against the things a company has.

When something that affects the financial condition of a company happens, we call that a ***transaction***. For instance, when a company sells something, buys something, pays something - all of these are transactions. When accounting for the***transactions*** of a business the following basic equation is always true:

**Assets = Liabilities + Owners’ Equity**

An **asset** is the company’s stuff.

A **liability** is what the company owes on its stuff.

The **owners’ equity** represents the owners’ interest in the company.

Consider that when a company starts, all the money it starts with comes from either the owners or from loans. Let’s say we start a business on January 1, 20x1. We are starting a book business, with $5,000 of our own money and $5,000 borrowed from Aunt Martha. We promised Aunt Martha that we would pay her back in six months. She said she didn’t want any interest. We issued 1,000 shares to ourselves for the $5,000 we invested. We must keep track of all transactions that affect our business so we write on a page in our notebook:

Assets = Liabilities + Owners’ Equity

$10,000 = $5,000 + $5,000

We decide that we want to become more precise, so we name the assets, liabilities and owners’ equity such that

Assets = Liabilities + Owners’ Equity

Loan Payable

Cash Aunt Martha Owners’ Investment

$10,000 = $5,000 + $5,000

Now we rent out a store for $1,000 per month. We pay the first month’s rent of $1,000.

Until we use it, the rent is an asset, *prepaid rent.* Our equation now looks like this:

**Assets = Liabilities + Owners’ Equity**

Prepaid Loan Payable

Cash Rent Aunt Martha Owners’ Investment

$ 9,000 + $1,000 = $5,000 + $5,000

Note that the liabilities and owners’ equity didn’t change, we just added an asset (prepaid rent) and subtracted the same amount from another asset (cash).

Since the store came fully furnished, cash register and everything, we are ready to start selling books.

We buy 600 books at $10 each. We buy the books from Sam’s Publishing, paying 1/2 down and owing the other 1/2 which we have agreed to pay in 30 days.

**Assets** = **Liabilities** + **Owners’ Equity**

Prepaid Accounts Loan Payable Owners’

Cash Rent Inventory Payable Aunt Martha Investment

$ 6,000 + $1,000 + $6,000 = $3,000 + $5,000 + $5,000

For the purposes of our problem, we will assume all books are exactly the same. We buy the books for $10 each and sell the books for $20 each. (Selling something for double what you paid for it is known as *keystoning* and is the most common *markup* in the retail business).

**What is *Revenue*?**

Revenue is the inflow to a business for what it does. In other words, if the business sells stuff, then when it sells something, the amount it sells it for is revenue. When a business sells things then the revenue is called *sales.* If the business is say, an attorney’s office, then the revenue is titled *fees*. So the inflow to the business for what it does is called the company’s revenue.

Now why did we say inflow to a business instead of saying the cash a business receives? Because a business can sell things on credit. If we sell on credit, then the increase is to *accounts receivable* instead of cash. Note that whenever we sell something, we increase the owners’ equity sub account *revenue* and increase an asset account, either cash or accounts receivable.

**What is an *Expense*?**

An expense is any outflow that is used up to generate revenues. If we are selling books, the buying of the books to sell is not an expense. When we buy the books we plus the asset *inventory* and decrease the asset cash, or increase the liability *accounts payable.* When we sell the books, we decrease the inventory and increase the expense, *cost of goods sold.* Some expenses are easy to recognize such as cost of goods sold, but others take a little more thought. For instance, rent is an expense because we needed the store to sell the books. Wage expense is an expense because we needed the workers to sell the goods. Other expenses are even more elusive, such as insurance expense, interest expense and tax expense. Each of these expenses are necessary to help us generate revenue.

**Month #1 - Book Business**

During our first month, in addition to what we accounted for previously, we sold 200 books for cash and 100 books on credit. For the books we sold on credit, all the customers told us they would pay us next month.

Follow us while we account for the rest of the transactions. Remember A **always** = L + O/E. Revenues are a “plus” to owners’ equity and expenses are a “minus” to owners’ equity. (Can you figure out why this is true?). The tax rate is 30% of Income Before Taxes.

We increase the cash $4,000 (200 X $20) and increase the revenues by the same amount.

**Assets = Liabilities + Owners’ Equity**

**Accounts Prepaid Accounts Loan Payable Owners’**

**Cash + Receivable + Rent + Inventory = Payable + Aunt Martha + Investment + Revenues - Expenses**

**Beg Bal $ 6,000 + $1,000 + $ 6,000 = $3,000 + $5,000 + $5,000**

**sold 200**

**books 4 ,000 $4,000**

Next we have to account for the books we sold. We take 200 X $10 out of inventory as we don’t have these books any more. Where did the $2,000 go? I hope you said it became an expense. That is exactly what happened. (When accountants want to signify that something is subtracted from a column, they put < > around the number).

**Assets = Liabilities + Owners’ Equity**

**Accounts Prepaid Accounts Loan Payable Owners’**

**Cash + Receivable + Rent + Inventory = Payable + Aunt Martha + Investment + Revenues - Expenses**

**Beg Bal $ 6,000 + $1,000 + $ 6,000 = $3,000 + $5,000 + $5,000**

**2sold 200**

**books-cash 4 ,000 \_\_\_\_\_\_ <2,000> $4,000 - $2,000**

**Subtotal $10,000 + $1,000 + $4,000 = $3,000 + $5,000 + $5,000 + $4,000 - $2,000**

**Sold 100**

**books**

**on credit $2,000 <1,000> = + 2,000 - 1,000**

**8Used**

**one month’s**

**rent <1,000> = - 1,000**

**Paid Taxes**

**of 30% <600> = - 600**

**\_\_\_\_\_\_\_ \_\_\_\_\_\_ \_\_\_\_\_\_\_ \_\_\_\_\_\_ \_\_\_\_\_\_ \_\_\_\_\_\_\_ - \_\_\_\_\_\_ Balance**

**End of**

**Month $ 9,400 + $2,000 + -0- + $3,000 = $3,000 + $5,000 + $5,000 + $6,000 - $4,600**

We also account for the taxes we have to pay (.30)\*(Revenues – Expenses)

(.30)\*(6,000 - 2,000 - 1,000 – 1,000) = 600

Note that at the end of the month, our prepaid rent is gone - it is all used up. Instead of an asset, it is now a used asset, which we call an expense.

From the above information, we can prepare a P & L, Statement of Owners’ Equity and a Balance Sheet for the first month of our Book Business.

**The Book Business The Book Business**

**Income Statement Statement of Owners’ Equity**

**Month Ended January 31, 20x1 For the Month Ended January 31, 20x1**

Owners’ Retained

Investment Earnings Totals

Sales Revenue $ 6,000 Balance, December 31, 20x0 $ -0- $ -0- $ -0-

Cost of Goods Sold 3,000 New Investment 5,000 5,000

Gross Margin 3,000 Net Income for 20x1 1,400 1,400

Operating Expenses Balance, January 31, 20x1 $ 5,000 $ 1,400 $ 6,400

Rent Expense 1,000

Income Before taxes 2,000

Income Taxes 600

Net Income $1,400

Earnings Per Share $ 1.40

**The Book Business**

**Balance Sheet**

**January 31, 20x1**

Assets Liabilities

Current Assets Current Liabilities

Cash $ 9,400 Accounts Payable $ 3,000

Accounts Receivable 2,000 Loan Payable - Aunt Martha 5,000

Inventory 3,000 Total Current Liabilities 8,000

Total Current Assets 14,400 Owners’ Equity

Fixed Assets Owners’ Investment 5,000

None 0 Retained Earnings 1,400

Other Assets Total Owners’ Equity 6,400

None 0 Total Liabilities

Total Assets $ 14,400 & Owners' Equity $ 14,400

Notice that the Income Statement and Statement of Owners’ Equity are for a period (Month Ended January 31, 20x1) while the Balance Sheet is as of a single date (January 31, 20x1). Again, the Balance Sheet is a picture of the business at a particular point in time, while the Income Statement, or P & L, and the Statement of Owners’ Equity are summaries over a period of time.

Company Name

Balance Sheet

Date

Assets Liabilities & Owners’ Equity

Current Assets Liabilities

Cash $ x,xxx Current Liabilities

Accounts Receivable $xx,xxx Accounts Payable $xx,xxx

Less: Allowance for Wages Payable x,xxx

Doubtful Accounts < x,xxx> *(Account name)* Payable x,xxx

Net Accounts Receivable xx,xxx *(Account name)* Payable x,xxx

Inventory xx,xxx Current Maturities of Long-Term Debt xx,xxx

Prepaid *(Account name)* x,xxx Total Current Liabilities xx,xxx

Total Current Assets xx,xxx

Long-Term Debt

Fixed Assets *(Account name)* Payable $ x,xxx

*(Account name)* xx,xxx *(Account name)* Payable x,xxx

*(Account name)* xx,xxx *(Account name)* Payable x,xxx

*(Account name)* xx,xxx Total Long-Term Debt xx,xxx

Total Fixed Assets xx,xxx Total Liabilities xx,xxx

Less: Accumulated

Depreciation <xx,xxx> Owners’ Equity

Net Fixed Assets xx,xxx Preferred Stock xx,xxx

Common Stock xx,xxx

Other Assets Additional Paid-In Capital-

Goodwill xx,xxx Common xx,xxx

Security Deposit x,xxx Retained Earnings xx,xxx

Patents xx,xxx Less: Treasury Stock < x,xxx>

Total Other Assets xx,xxx Total Owners’ Equity xx,xxx

Total Assets $xxx,xxx Total Liabilities & Owners’ Equity $xxx,xxx

**The first residency**

Overall goal

Let’s go over Show Home Depot financial statements

During this class we are going to learn how to construct simple versions of these financial statements. More importantly you will begin to learn how to interpret these financial statements and how you can use that information for your own profit!!

Notice there are 4 major financial statements and lots and lots of footnotes which supplement or explain these financial statements.

For this class you will not need any special book. We will provide you with all the materials you need. **Except** you willneed to buy a TI BA II. [amazon calculator](http://www.amazon.com/Texas-Instruments-Plus-Financial-Calculator/dp/B00000JZKB/ref=sr_1_1?s=office-products&ie=UTF8&qid=1334864683&sr=1-1)

Or at your local Walmart for $5-$10 more

Introduction to the Learning methodology

**First, a primer on how you learn and how this course operates**

**What does your brain want above all else? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**And how does it do that?**

**C \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ F \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**C \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ P \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**And the last two can overwhelm the others.**

**Your Brain**

**Draw brain and show how it works to learn**

**Front Brain Back Brain**

**Decisions What we know**

**Consequences Long-term memory**

**Predicting Emotions related to experiences**

**Creating Language**

**Tomorrow! Yesterday!**

**Learning depends on experience, but it also requires reflection, developing abstractions, and active testing of our abstractions. Often we will almost skip the reflective stage, and try a shortcut to an idea or even an action. AoCtB**

**-Sensory input goes primarily to the back half of the brain.**

**It is where long-term memory is. It is about the past.**

**-The front integrative cortex is about the future. It is where we develop ideas and abstract hypotheses. Things are weighted here. It is where we take charge. AoCtB**

**How do I learn?**

**I grope.**

***A. Einstein***

**AoCtB refers to The Art of Changing the Brain, James Zull, Stylus Publishing 2002**

**Ohhhh -about asking questions---**

**Neils Bohr**

***“Dream no small dreams for they have not the power to move men.”***

So during this class you will spend a lot of time working on problems. Even when we are on line together, there will be a lot of dead time as you work on problems.

**The Hot dog stand**

**Accounting Equation:**

**Assets = Liabilities + Owners’ Equity**

**Go Back to Home Depot**

**Point out how this works**

**Go over classified financial statements**

**So we are going to start a corporation to sell hot dogs in a cart on the corner of Court and Union. We form a corporation, Hot Dogs, Inc. and you and everyone in the class invests $100 and we each get one share of stock for that $100. Assume there are 90 of us. We elect a Board of Directors, a COO and start to do business. First we borrow $10,000 from the bank and buy a new cart for that amount. Next we buy 1,000 dogs and 1,000 buns. Dogs cost .15 and buns are .05 each. For our first month, we sell 900 dogs for $2 each. We pay our worker $600 and our other expenses are $300. How did we do? Are we rich yet? Was it a good investment?**

**The matching concept is:**

**Expenses must be \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**

**How would the Hot Dog Inc. financials have changed if we owed our worker $100 at the end of January for work she did the last week of the month?**

Now let’s check our understanding of the basic financial statements

**From the following information for Annabella, Inc., prepare the financial statements for the year ending December 31, 2012.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Cash | 58,000 |  | Common Stock | 50,000 |
| Accounts Receivable | 15,000 |  | Retained Earnings | 324,000 |
| Inventory | 80,000 |  | Sales | 410,000 |
| Building | 200,000 |  | Cost of Goods Sold | 200,000 |
| Equipment | 100,000 |  | Salary Expense | 50,000 |
| Accumulated Depreciation | 20,000 |  | Rent Expense | 36,000 |
| Security Deposit | 3,000 |  | Depreciation Expense | 10,000 |
| Accounts Payable | 12,000 |  | Office Expense | 10,000 |
| Salaries Payable | 4,000 |  | Interest Revenue | 1,000 |
| Taxes Payable | 6,000 |  | Interest Expense | 5,000 |
| Note Payable, Long-Term | 40,000 |  | Income Tax Expense | 30,000 |

The company had 800 shares of common stock outstanding on December 31, 2011. On June 30, 2012 Annabella, Inc. issued 200 more shares of common stock. Annabella, Inc. declared and paid a $5,000 dividend in 2012. The beginning Common Stock was $40,000 and beginning Retained Earnings was $259,000.

(calculate earnings per share)

This one is a little harder- the accounts are in alphabetical order.

From the following information for 2011 for Dariko, Inc. prepare Financial Statements. Assume a December 31 year end.

|  |  |
| --- | --- |
| Accounts Payable | $200,000 |
| Accounts Receivable | 80,000 |
| Accumulated Depreciation | 46,000 |
| Advertising Expense | 19,000 |
| Building | 300,000 |
| Cash | 106,000 |
| Common Stock | 300,000 |
| Cost of Goods Sold | 500,000 |
| Equipment | 140,000 |
| Interest Expense | 5,000 |
| Inventory | 120,000 |
| Depreciation Expense | 28,000 |
| Notes Payable, Long-Term | 10,000 |
| Patent | 50,000 |
| Rent Expense | 75,000 |
| Retained Earnings | 171,000 |
| Sales | 825,000 |
| Salaries Payable | 60,000 |
| Salary Expense | 100,000 |
| Tax Expense | 18,000 |
| Taxes Payable | 9,000 |
| Utilities Expense | 40,000 |

Dariko, Inc. issued 200 shares of common stock on June 30, 2011. There were 800 shares of common stock outstanding at the end of 2010. The company declared and paid a $10,000 dividend during 2011. The beginning Common Stock was $240,000 and the beginning Retained Earnings was $141,000.

So…..

An **Income Statement** is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Revenues are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Expenses are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Another name for the Income Statement is the \_\_\_\_ & \_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_& \_\_\_\_\_\_\_\_\_\_\_.

And the phrase \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_ \_\_\_ \_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_ comes from this.

**A Balance Sheet is** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

We classify the Balance Sheet into sections or categories. Usually this segregation is done

according to L\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ on the Asset side

and when they \_\_\_\_\_\_\_\_\_\_\_\_\_\_ b\_\_ p\_\_\_\_\_\_\_\_ on the liability side.

An Asset is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

On the Asset side we have C \_\_\_\_\_\_\_\_\_\_\_\_ A\_\_\_\_\_\_\_\_\_\_\_\_\_ and other categories such as F\_\_\_\_\_\_\_\_\_\_\_\_\_ A\_\_\_\_\_\_\_\_\_\_\_\_ and O\_\_\_\_\_\_\_\_\_\_\_ A\_\_\_\_\_\_\_\_\_\_\_

A Liability is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

And on the Liability side of the Balance Sheet we have

C\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ L\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

L\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ L\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

and maybe O\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ L\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Owners’ Equity is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Two types of capital C\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and

E\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ which is termed R\_\_\_\_\_\_\_\_\_\_\_ E\_\_\_\_\_\_\_\_\_\_\_ in a corporation

A **dividend** is **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**

**Rule of the Professional 1.1 (The first gambit of the negotiator)**

**F\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_**

**1.2 The 90% rule**- **\_\_\_\_\_\_ of your \_\_\_\_\_\_\_\_\_\_ is based on your\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_.**

Learning Assignments after the First Residency

**Problem 1**

**Arlington, Inc. had the following account balances at December 31, 2012:**

Accounts Payable $ 24,000

Accounts Receivable 38,000

Notes Payable- long term 104,000

Cash 140,000

Depreciation Expense 24,000

Common Stock 180,000

Cost of Goods Sold 400,000

Equipment 136,000

Inventory 34,000

Land 180,000

Prepaid Insurance 30,000

Accumulated Depreciation 48,000

Retained Earnings 240,000

Sales Revenue 820,000

Advertising Expense 73,000

Supplies Expense 16,000

Wages Expense 100,000

Goodwill 50,000

Interest Expense 7,000

Wages Payable 12,000

Tax Expense ??

The tax rate is 30% of the Earnings Before Tax and there are 10,000 shares of common stock outstanding at December 31, 2012. The company sold 3,000 shares of common stock on November 1, 2011 and declared and paid a dividend of $15,000. The beginning Common Stock was $126,000 and the beginning Retained Earnings was $115,000. P**repare Financial Statements for Arlington, Inc. for the year 2012.**

**Problem 2**

Everyone in the class invested $50.00 each in Billy Bob’s Bodacious Biff’s. For your investment you each got 1 share of common stock. Assume there are 100 of you. The business began on January 1, 2012 with each of us paying our money to the company for the stock. So our company began with $5,000 in cash and $5,000 in Common Stock (Owners’ Equity). During 2012, BBBB, Inc. borrowed $100,000 to be repaid in five years with interest of $10,000 to be paid yearly. They bought a piece of land for future expansion of the business for $30,000 by putting $2,000 down and signing a Note to pay the rest next year. Also during the year, the company purchased 10,000 Biffs for $8 each and sold 9,000 for $20 each. The company also paid a security deposit of $6,000 (this would be an asset of the BBBB) on the building it is renting, paid rent of $12,000, salaries of $24,000, and interest of $10,000. Taxes for 2012 were 30% and these will be paid in 2013. How did the company do?

**Prepare an Income Statement and a Balance Sheet. Comment on the results**

**You may do this any way you want. Only use debits and credits if you understand them. Otherwise use a spreadsheet or whatever method you devise to summarize and categorize the information.**

**Problem 3**

SamsunCompany earned $100,000 last year. The company had 5,000 shares of common stock outstanding on January 1, sold 8,000 shares on April 1 and sold 4,000 shares on

October 1. Calculate the EPS for Samsun.

**Problem 4**

The Arsen Co. earned $500,000 last year. The company had 100,000 shares outstanding on January 1, sold 6,000 shares on July 1 and sold 6,000 shares on October 1. The Arsen Co. stock sells for $50 per share. Calculate the EPS.

**Problem 5**

From the following information for Grandview Co. for the year ended 12/31/11, **prepare the Financial Statements**. There were 100 shares of common stock issued on April 1, 2011 and a dividend of $5,000 was paid on November 30, 2011. Beginning Common Stock was $9,000 and beginning Retained Earnings was $57,500.

Advertising Expense $ 1,000 Rent Expense 12,000

Cash 47,000 Retained Earnings 63,000

Common Stock (1,000 shares) 10,000 Sales 85,000

Cost of Sales 40,000 Tax Expense 4,500

Inventory 25,000 Utilities Expense 2,000

Note Payable, Long-term 20,000 Wage Expense 10,000

Interest Expense 5,000Land 20,000

Goodwill 10,000Wages Payable 1,000

Accounts Payable 8,000

**Problem 6**

From the following information for John & Debbie’s Production Company for the year ended 12/31/11, **prepare Financial Statements**. The company issued 1,000 new shares of common stock for $10,000 on May 1, 2011 and declared and paid dividends of $2,000 in 2011. Beginning Common Stock was $90,000 and the beginning Retained Earnings was $90,600.

Accounts Payable 50,000 Interest Expense 8,000

Accounts Receivable 40,000 Note Payable, Long-Term 80,000

Advertising Expense 5,000 Rent Expense 36,000

Cash 50,000 Retained Earnings 134,000

Common Stock (10,000 Shares) 100,000 Sales 200,000

Cost of Sales 72,000 Tax Expense 18,600

Inventory 60,000 Utilities Expense 5,000

Land 200,000 Wage Expense 10,000

Patent 20,000 Wages Payable 6,000

**Read & study pages 18-35.**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**EPS for Bella (Problem on next page)**

**100,000/ 2/12 X 6,000 + 3/12 X 8,000 + 1/12 X 12,000 + 6/12 X 16,000**

**= 100,000/12,000**

**= $8.33**

**Calculating Weighted Average Earnings Per Share**

**Earnings Per Share (EPS)**

**Types of EPS**

**Basic**

**Diluted**

**We will only be using Basic during this class**

**EPS = Net Income**

**Weighted Average Number of Shares Outstanding**

**Weighted Average EPS**

Greges Corporation had net income for 2011 of $100,000. At the beginning of the year they had 10,000 shares of common stock outstanding. On April 1 they sold 4,000 shares to the public. On October 1, they sold 3,000 more shares. At December 31st, they had total assets of $1,000,000 and total Liabilities of $600,000. Calculate the EPS.

$100,000

(3/12 X 10,000)+ (6/12 X 14,000) + (3/12 X 17,000)

= 7.27

For 2011, Bella Company earned $100,000. The company had 6,000 shares outstanding on January 1, sold 2,000 shares on March 1 and sold 4,000 shares on June 1 and another 4,000 on July 1. Calculate the EPS for Bella. (Answer is on previous page.)

**Read the article on Debits and Credits- We will go over this in the first video conference**

**Read the article on Depreciation - We will go over this in the first video conference**

**Debits, Credits and Related Enigmas**

**Christine E. Kirch**

**David P. Kirch**

**The Basics**

Debit and credit are simply a way of keeping track of what happens in a business. It is the quintessential element of what is known as ***double entry bookkeeping***. For this class you do not really need to understand everything about bookkeeping, you just need to be able to create enough rules for yourself that you can get by.

Each business transaction is recorded using specific rules. These rules fall under the general category we call “Debit and Credit”. Using these rules we keep track of the financial transactions that affect the business.

First, we will review the stuff we talked about earlier when we introduced accounting. Remember the basic accounting equation for keeping track of transactions is:

**ASSETS = LIABILITIES + OWNERS’ EQUITY**

A lotof beginning textbooks like to say that the assets equal claims against those assets. In other words, if you put $20,000 of your own money in a business, then you increase cash by $20,000 and you have a claim against that $20,000.

**ASSETS = LIABILITIES + OWNERS’ EQUITY**

**20,000 = 20,000**

Butnow we are going to modify this by saying that we divide each category or account into two sections as follows:

**Assets = Liabilities + Owners’ Equity**

**+ - - + - +**

Notice that we “plus” the assets on the left side and “minus” them on the right and that we “plus” the liabilities and owners’ equity on the right side and “minus” them on the left. In this way our equation of A = L + O/E is always in balance because our right side always equals our left side. Huh? Consider the transaction where you started the business. (We call these T-accounts for obvious reasons!)

**Assets = Liabilities + Owners’ Equity + - - + - +**

**20,000 20,000**

Instead of saying plus and minus, we are going to use the words **debit** and **credit.** The word **debit** simply refers to the **left side** of an account. The word **credit** simply refers to the **right side** of an account.

**~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~**

So we can now say that **assets** are **increased by debits** and **decreased by credits**. **Liabilities** and **owners’** **equities** are **increased by credits** and **decreased by debits**.

Ifall we wanted to keep track of was the totals of the assets and the liabilities and the owners’ equity, the above method would suffice. While this works, simply having just the three totals doesn’t provide enough information to be useful for decision-making. We probably will want or need to know how much of the assets is in cash and how much is in inventory. Therefore, we want to break the assets down into categories or **“accounts”**. Further, we will break down our main categories of Assets, Liabilities and Owners’ Equity into more descriptive sub-categories.

**ASSETS = LIABILITIES + OWNERS’ EQUITY**

**Cash Owners’ Investment**

Debit Credit Debit Credit

**20,000 = 20,000**

Now assume your new company borrows $10,000 from the bank. You have an increase in the asset *cash* of $10,000 and an increase in the liability (or claim against assets) *bank loan payable* of $10,000.

**ASSETS = LIABILITIES + OWNERS’ EQUITY**

**Cash**   **Bank Loan Payable**  **Owners’ Investment**

Debit CreditDebit CreditDebit Credit

**20,000 = 20,000**

**10,000 = 10,000 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**30,000 = 10,000 + 20,000**

Next, your company spends $15,000 for inventory.

**ASSETS = LIABILITIES + OWNERS’ EQUITY**

**Cash Inventory = Bank Loan Owners’ Investment**

Debit Credit Debit Credit Debit Credit Debit Credit

**20,000 = 20,000**

**10,000 = 10,000**

**15,000 15,000 \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**15,000**   **15,000 = 10,000 20,000**

Notice that we credited cash $15,000 and debited $15,000 to inventory. We used one asset (cash) to purchase another type of asset (inventory). Note also that the $15,000 balance in cash is the $30,000 debit total minus the $15,000 credit total.

As a final step to this stage of the accounting process, we introduce the process of **journalizing** or, preparing **journal entries**. **Journal entries** are simply a **written record of the transaction**. For instance, when we started the business above, our journal entry would have been:

**DR CR**

**Cash 20,000 *The debit***

**Owners’ Investment 20,000  *The credit***

**To record initial receipt of cash from the owner.  *The explanation of what the journal entry is recording.***

Note that we usually put the debit account name first and the debited account names are indented to the left. Debits are abbreviated **dr**. We then put the amount in the **dr** column, which is the left column. Next we put in the credit account name, indented to the right and the amount in the credit column, which is the column on the right. (Credits are abbreviated **cr**). After the journal entry, we write a short description or explanation of the transaction the journal entry is recording.

Now **let’s try and put all this together.**

**PROBLEM:**

It is January 1, 20x1. You and I have decided to go into the business of selling DVDs. I heard from a friend that there is an excellent teacher at UCGA University who explains debit and credit so anyone can understand it. And she does it in exactly two hours. I have arranged with a studio near the University to tape her lecture. They will then produce the videos and sell them to us for $10 each. We will be the exclusive distributor of the DVD- Debit for Dummies. The studio which tapes the lecture will take care of paying the prof a royalty and has the equipment to make all the DVDs we want. We have decided to operate as a corporation- The Chillicothe Learning Company. I will put $9,000 in the business for 9,000 shares of stock. You are a little short right now so you will put only $1,000 in the business for 1,000 shares of stock. You will run everything and give me monthly financial statements. You will receive a salary of $3,000 per month. The following things happened in January. Remember, you must keep track of everything and report to me monthly.

First we will start by writing down what happened. We write this down in a special form or what we call journalizing the transaction. You know that assets must equal liabilities + owners’ equity. For this transaction we increase our assets by $10,000 and increase owners’ equity by $10,000. The journal entry to record the above transaction would look like:

**Dr. Cr.**

**(1) Cash 10,000**

**Common Stock 10,000**

**To record issuing capital stock in exchange for cash.**

The next step in the recording process is to post the amounts to their respective accounts. This recording process, the taking of the numbers from the journal to the T-Accounts is called **posting**. After posting, the T-Accounts would look like:

**Cash Common Stock**

Dr. Cr. Dr. Cr.

**(1) 10,000 10,000 (1)**

**January 1:** While we were at the bank we borrowed $6,000 which we agreed to repay in two years. The loan carries interest at 12% which we will pay at the end of each year.

**Dr. Cr.**

**(2) Cash 6,000**

**Note Payable-Bank 6,000**

**To record the loan from the bank.**

Our T-accounts look like:

**Cash Note Payable-Bank Common Stock**

Dr. Cr. Dr. Cr. Dr. Cr.

**(1) 10,000 6,000 (2) 10,000 (1)**

**(2) 6,000**\_\_\_\_\_\_\_\_\_

**16,000**

**January 5:** We purchased 1,250 DVDs with cash.

**Dr. Cr.**

**(3) Merchandise Inventory 12,500**

**Cash 12,500**

**To record purchase of inventory 1,250@$10.**

The T-accounts will look like:

**Merchandise Note Payable**

**Cash Inventory Bank Common Stock**

Dr. Cr. Dr. Cr. Dr. Cr. Dr. Cr.

**(1)10,000 12,500 (3) (3) 12,500 6,000 (2) 10,000 (1)**

**(2) 6,000**\_\_\_\_\_\_\_

**16,000 12,500**

**3,500**

**January 31:** We sold 900 DVDs for $20 each during the month of January. We paid your

salary of $3,000, rent of $1,000, utilities of $350 and advertising of $250.

**Dr. Cr.**

**(4) Cash 18,000**

**Sales 18,000**

**To record January sales.**

**(5) Cost of Goods Sold 9,000**

**Merchandise Inventory 9,000**

**To record the cost of the sales for January.**

**(6) Salary Expense 3,000 (*These could have***

**Rent Expense 1,000 *been have been***

**Utilities Expense 350 *recorded as separate***

**Advertising Expense 250  *journal entries. This***

**Cash 4,600 *is* *what is known* *as***

**To record expenses paid with *a* *compound journal***

**cash in January. e*ntry*.)**

Sales and expenses are special accounts in the owners’ equity section of the balance sheet.

Revenues (sales) *increase owners’ equity* and expenses *decrease owners’ equity*. (We will

go into the why of this later). Expenses are *increased by debits* and revenues, or sales, are

*increased by credits*.

**Cash Merchandise Inventory Note Payable-Bank Common Stock**

Dr. + Cr. - Dr. + Cr. - Dr. - Cr. + Dr. - Cr. +

**(1) 10,000 12,500 (3) (3) 12,500 6,000 (2) 10,000 (1)**

**(2) 6,000 9,000 (5)**

**(4) 18,000 \_\_\_\_\_\_\_\_\_\_\_\_**

**4,600 (6) 12,500 9,000**

**34,000 17,100 3,500**

**16,900**

**Sales Cost of Goods Sold** Dr. - Cr.+Dr. + Cr.-

**18,000(4) (5) 9,000**

**Salary Expense Rent Expense**

Dr. + Cr. - Dr. + Cr. -

**(6) 3,000 (3) 1,000**

**Utilities Expense Advertising Expense**

Dr. + Cr. - Dr. + Cr. -

**(6) 350 (6) 250**

**Some final notes concerning T-Accounts and Journal Entries.**

All accounts that eventually wind up on the balance sheet (Cash, Merchandise Inventory,

Note Payable - Bank and Common Stock are termed ***real accounts***. All the accounts that end

up on the income statement are called ***temporary*** ***accounts***. At the end of each year, the

temporary accounts are ***closed***to a balance sheet account called ***Retained Earnings***. This

closing process allows us to keep track of only the current year’s sales and expenses. This

allows the data to be much more relevant to decision makers. If we assume that the above

transactions were for the whole year instead of just of the month, then our closing entry would be:

**(7) Sales 18,000**

**COGS 9,000**

**Salary Exp 3,000**

**Rent Expense 1,000**

**Utilities Exp 350**

**Advert Exp 250**

**Retained Earnings 4,400**

**To close the temporary accounts for the year**

Retained Earnings is an owners’ equity account where we accumulate the earnings for each year. Note that after you post the above entry, all the temporary accounts (Sales, Cost of Goods Sold, Salary Expense, Rent Expense, Utilities Expense and Advertising Expense) would now have -0- balances. They are ready to begin accumulating the data for the next year.

From these balances now, can you construct an Income Statement, Statement of Owners’ Equity

and Balance Sheet? (Try it and then check the next page)

**Our DVD, Inc.**

**Income Statement**

**For the Month Ended January 31, 20x1**

**Sales $ 18,000**

**Cost of Goods Sold 9,000**

**Gross Margin 9,000**

**Operating Expenses:**

**Salary Expense $ 3,000**

**Rent Expense 1,000**

**Utilities Expense 350**

**Advertising Expense 250**

**Total Operating Expenses 4,600**

**Net Income $ 4,400**

**Earnings Per Share $ 0.44**

**Statement of Owners Equity**

**For the Month Ended January 31, 20x1**

**Common Stock Retained Earnings Totals**

**Beginning Balances, January 1, 20x1 $ 0 $ 0 $ 0**

**Common Stock Issued 10,000 10,000**

**Net Income 4,400 4,400**

**Less: Dividends Declared < 0> < 0>**

**Ending Balances, January 31, 20x1 $ 10,000 $ 4,400 $ 14,400**

**Our DVD, Inc.**

**Balance Sheet**

**January 31, 20x1**

**Assets Liabilities**

**Current Assets Current Liabilities**

**Cash $16,900 None**

**Merchandise Inventory 3,500 Total Current Liabilities $ -0-**

**Total Current Assets 20,400 Long-Term Liabilities**

**Note Payable-Bank 6,000**

**Fixed Assets Total Liabilities 6,000**

**None 0 Owners’ Equity**

**Common Stock $10,000**

**Other Assets Retained Earnings 4,400**

**None 0 Total Owners’ Equity 14,400**

**Total Liabilities and Total Assets $ 20,400 Owners’ Equity $ 20,400**

(Note the ***only*** time that **Retained Earnings** and **Net Income** will be the **same** is after the

***first year*** of operations).

**Depreciation**

When a company buys a *fixed asset* (accountanteze for buildings, machines, furniture, trucks and so forth) the cost of the asset, except land, must be allocated over the period the asset helps the company generate revenues. The period over which the asset is useful to the company in generating revenues is called its *economic* or *useful life*. Therefore, a definition of ***depreciation expense*** is the allocation of the cost of a fixed asset over its estimated useful life. To figure the amount of the expense for each year under the ***straight-line*** method of depreciation, we use the following formula:

**Cost - Estimated Salvage Value**

**Depreciation Expense per year = Estimated Life of the Asset**

Suppose we bought a truck to deliver our product. The truck cost us $30,000 and we estimate that we will use it for 3 years before it becomes too expensive to keep it going. We further estimate that at the end of the three years we will be able to sell it for $3,000. This $3,000 is the *estimated salvage value* (also termed the *residual value).*

So, when we buy the truck our journal entry is:

**Truck 30,000**

**Cash (or loan payable) 30,000**

**To record purchase of truck.**

Then, at the end of the year, we would have the journal entry:

**Depreciation expense 9,000**

**Accumulated Depreciation 9,000**

**To record depreciation for the year.**

***Accumulated Depreciation*** is an enigmatic account for many students. It is a ***valuation account*.** It is also a ***contra account*.** Now let’s see what it really is. The truck account will remain the same, $30,000, until we sell or trade in the truck. The amount of depreciation we take on the truck will accumulate over the years we own it in the Accumulated Depreciation account. The cost minus the accumulated depreciation of any fixed asset is known as its ***book value***. Consider the P & L and the Balance Sheet for each of the following years:

**P&L Year 1 Year 2 Year 3**

**Sales**

**Cost of Good Sold**

**Gross Margin**

**Operating Expenses:**

**Xxxxx Expense**

**Xxxxx Expense**

**Depreciation Expense 9,000 9,000 9,000**

**Balance Sheet**

**Current Assets**

**Xxxxxxx**

**Xxxxxxx**

**Xxxxxxx**

**Total Current Assets**

**Fixed Assets**

**Truck 30,000 30,000 30,000**

**Less: Accumulated**

**Depreciation < 9,000> <18,000> <27,000>**

**Net Fixed Assets 21,000 12,000 3,000**

By accounting for the truck and its depreciation in this manner, we are imparting a lot more information than if we just credited the truck for the depreciation. If we are considering investing in this company, we can tell approximately how old its assets are. This gives us an idea of when they will need replaced.

Let’s assume that we sell the truck for $3,000 at the end of the third year.The journal entry would be:

**Cash 3,000**

**Accumulated Depreciation 27,000**

**Truck 30,000**

**To record sale of truck**

(We will leave the selling of the truck for more or less than $3,000 for later).

If we originally purchased the truck at a point in the year other than the beginning, we would adjust our depreciation for the period we used it. Many companies have special rules for these situations. A common one is that the company takes 1/2 of a year’s depreciation in the year they buy the asset, no matter when in the year that occurs, and they take 1/2 of a year’s depreciation in the year they sell the asset, again, no matter when in the year that occurs.

Later we will cover how depreciation is done for tax purposes and another method of figuring depreciation which is based on the actual usage of the asset.

The First Virtual Class

The Basics of Debit and Credit

Remember the Accounting Equation is

**Assets = Liabilities + Owners’ Equity**

**Now we are going to detail a method of keeping track of the transactions of a business.**

**We will use your homework problem as a basis for what we are learning**

Everyone in the class invested $50.00 each in Billy Bob’s Bodacious Biff’s. For your investment you each got 1 share of common stock. Assume there are 100 of you. The business began on January 1, 2012 with each of us paying our money to the company for the stock. So our company began with $5,000 in cash and $5,000 in Common Stock (Owners’ Equity). During 2012, BBBB, Inc. borrowed $100,000 to be repaid in five years with interest of $10,000 to be paid yearly. They bought a piece of land for future expansion of the business for $30,000 by putting $2,000 down and signing a Note to pay the rest next year. Also during the year, the company purchased 10,000 Biffs for $8 each and sold 9,000 for $20 each. The company also paid a security deposit of $6,000 (this would be an asset of the BBBB) on the building it is renting, paid rent of $12,000, salaries of $24,000, and interest of $10,000. Taxes for 2012 were 30% and these will be paid in 2013. How did the company do?

**Solution- First we must deal with the back brain. We need to break the process down into simple steps.**

**Create a Ledger-----🡪Write it down-----🡪 Group it ----🡪 Make Financial Statements**

**(When we say record transactions and Prepare Financial Statements, this is what we mean)**

**Go over Excel and how to make cells tie together.**

**Create A Ledger**

**Rules of the T-Accounts:**

Organize! Keep all assets, liabilities, owners’ equity, revenues and expense accounts in their

own separate place on your paper.

Leave room in each section for additional accounts that might arise from the problem you are

considering.

**Assets = Liabilities + Owners’ Equity + ( Revenues - Expenses )**

**Write out in “accountanteze” what happened. This is done in a journal entry.**

**Rules of the Journal Entry:**

Journal entries are always numbered.

Debits are to the left.

Credits are to the right.

The journal entry is always followed by an explanation.

A blank line is left between journal entries.

**As we journalize, we post to the General Ledger**

**Finally, we summarize what happened in a usable form called a financial statement. We will eventually have four financial statements that we prepare.**

**We will do the Income Statement first**

**(Statement of Income, Statement of Earnings, P&L, Profit & Loss)**

**Balance Sheet (Statement of Financial Position, Statement of Financial**

**Condition, Statement of Assets, Liabilities & Owners’ Equity)**

**Statement of Owners’ Equity (Statement of Shareholders’ Equity, Statement of Stockholders’ Equity, Statement of Retained Earnings)**

**The concept of future value:**

If you have $100 today and put it in a bank, how much will you have in the future?

**|------------------------------------------------------------------------------------|**

In order to put this concept to practical work, I need to know

1) when in the future are you talking

2) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

a) So you have $100 today, the bank pays annual interest of 10%, how much will you have in one year?

b) Two years?

c) One year and the bank pays interest at 10% compounded semi-annually?

Interest is normally stated on an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ basis.

d) If you have $1,000 today, how much will you have in 2 years, 12% interest, compounded quarterly?

**The formula for FV is**

The n is the number of *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.*

If I put $100 in the bank today, the bank pays interest semi-annually at 8%, how much will I have in one year?

If I put $100 in the bank today, the bank pays interest quarterly at 12%, how much will I have in one year?

After the first virtual class

The First Accounting Project

Bobkatz is a wholesaler which specializes in selling Biffs. Biffs are an essential component of the manufacturing process of many different items. All sales are on credit. The sale terms are net 30.

The company was started on January 1, 2012. Initially, 10,000 shares of stock were sold for $10 per share and you bought 100 of these shares.

During 2012 the following transactions occurred.

Jan 1, Received $100,000 for the sale of 1,000 shares of common stock.

The stock has a par value of $10 per share.

Jan 1, Rented a building for $3,000 per month.

June 30, the purchased land for $110,000 for future expansion. They paid $10,000

down and signed a long-term note for the remaining balance. The note is

payable interest only at 8% for ten years. The interest is payable June 30th of

each year.

September 30th the company purchased a one year insurance policy for $1,200.

During the year they purchased 1,200,000 biffs for $.50 each. They terms of the purchases were that Bobkatz paid the suppliers in thirty days.

During the year the company sold 1,100,000 biffs for $.75 each. The terms of the sales

were net 30.

During 2012 Bobkatz collected $580,000 from its customers.

During 2012 Bobkatz paid $440,000 to its suppliers.

During the year Bobkatz hired four workers who were to be paid $15.00 per hour.

During the year the company paid the following:

Utilities $2,800

Advertising 8,000

Rent 36,000

Wages 72,000

Office salaries 80,000

Office expenses 13,200

The tax rate is 30% and the company paid half of its 2012 taxes this year and will pay the rest next year.

Using excel, prepare T accounts, journal entries and financial statements. Excel cells must tie together.

The Second Virtual Class

**Depreciation**

**What it is, is**

You bought a new truck to use to deliver the Whatevers that you sell. The truck cost $30,000, will last for 4 years. At the end of 4 years, you figure you could sell it for $2,000.

Formula for Straight-Line Depreciation:

Journal Entries

T-Accounts

Goes on the Balance Sheet

**Inventories**

Specific Identification

Weighted Average

LIFO \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(Not used much anymore because of the I\_\_\_\_\_\_\_\_\_\_\_\_\_\_.)

FIFO means \_\_\_\_\_\_\_\_\_\_\_ \_\_\_, \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_.

Inventory “turn”

and taking that one step further,

gives us the A\_\_\_\_\_\_\_\_\_\_\_\_ days \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_

The turtorials and instruction book for your calculator make some easy calculations very difficult. If you do one or two additional steps, it all becomes easy.

First, some basics

The third line of the calculator is the one we will be using the most.

N is the number of compounding periods

I/Y is the interest rate per compounding period

PV is the present value

PMT is the payment per period

FV is the future value

To set your decimal points

2nd Format (bottom middle key)

Enter number of decimal points you want to use.

Enter (top line second key)

**Future Value Problems**

How much will I have in the bank in 1 year if I put $100 in today, bank pays interest at 10% compounded annually?

1) **2nd clr tvm**

2) 100 **PV**

3) 1 **N**

4) 10 **I/Y**

5) CPT FV FV = -110.00

How much will I have in the bank in 1 year if I put $100 in today, bank pays interest at 10% compounded semi-annually?

1) **2nd clr tvm**

2) 100 **PV**

3) 2 **N**

4) 5 **I/Y**

5) CPT FV FV = -110.25

**Present Value Problems**

What is the present value of $1,000 to be paid to me in 2 years, bank pays interest annually at 10%.

**2nd CLR TVM**

1. **FV**

**2 N**

**10 I/Y**

**Cpt PV -826.45**

What is the present value of $1,000 to be paid to me in 2 years, bank pays interest of 10% semi-annually?

**2nd CLR TVM**

**1,000 FV**

**4 N**

**5 I/Y**

**Cpt PV -822.70**

**Payments**

You want to buy a new car. The cost is $50,000. You make 5 equal annual payments which include interest at 10%. How much are the payments?

**2nd CLR TVM**

**50,000 PV**

**5 N**

**10 I/Y**

**Cpt PMT -13,189.87**

What would the payments be if they were monthly?

**2nd CLR TVM**

**50,000 PV**

**5X12 = N**

**10/12 = I/Y**

**Cpt PMT -1,062.35**

**Differential Interest**

Bob will sell you a DooDad for $10,000 payable in 3 equal annual payments which include interest at 2%. The bank would charge you 10% for the same loan. How much are you really paying for the DooDad?

**2nd CLR TVM**

**10,000 PV**

**3 N**

**2 I/Y**

**Cpt PMT**

**10 I/Y**

**Cpt PV 8,623.28**

How much would you pay for a 10 year, 100,000 bond, 10% interest payable annually, to earn 8% interest?

**2nd CLR TVM**

**100,000 FV**

**10 N**

**.10 X 100,000 = PMT**

**8 I/Y**

**Cpt PV 113,420.16**

You are buying a 10 year, $100,000 Note issued 5 years ago. The Note is being paid in equal annual payments which included interest at 10%. Current interest rates are 12%. The Note has exactly 5 years of payments left and you will get the first in 1 year. How much do you pay to earn 12%?

**2nd CLR TVM**

**100,000 PV**

**10 N**

**10 I/Y**

**Cpt PMT**

**5 N**

**12 I/Y**

**Cpt PV 58,666.07**

**Present value**

First, back to an easy future value problem, how much will you have in one year if you put $100 in the bank today and the bank pays interest compounded annually at 10%?

How much do you need to put in the bank today to have $110 in one year if the bank pays interest at 10%, compounded annually?

What if you wanted to have $100 in one year, bank pays interest at 10% compounded annually?

**The formula for present value**

**Using the calculator:**

How much do I need to put in the bank today if I want to have $1,000 in 3 years, the banks pays interest at 10% compounded annually?

2nd CLR TVM

1000 FV

3 N

10 I/Y

CPT PV

How much do I need to put in the bank today if I want to have $1,000 in 3 years, the banks pays interest at 10% compounded semi-annually?

2nd CLR TVM

1000 FV

3 X 2= N

10÷2= I/Y

CPT PV

How about wanting $50,000 in 10 years bank pays interest 16% payable quarterly?

Or 2nd CLR TVM

50000 FV

10 X 4= N

16÷4= I/Y

CPT PV

**Problems**

**1)** How much do you need to put in the bank if you want to have $1,000,000 in 5 years, bank pays interest at 4% compounded annually?

**2)** Compounded semi-annually?

**3)** How much if you want to have $100,000 in 15 years, the bank pays interest at 8% compounded annually?

**4)** What if you want $1,000,000 in 20 years at 12% compounded semi-annually?

**5)** Problem 4 compounded quarterly?

**Annuities**

1. How much do you need to put in the bank today so you can take out $100 per year

for each of the next two years? The bank pays interest at 12% compounded

annually. You will make your first withdrawal exactly one year from today.

1. How about $1,000 per year for next 4 years, bank pays interest at 10% compounded

annually?

1. How much do you need to put in the bank today so you can take out $10,000 per year for the next five years? The bank pays interest at 8% compounded annually.
2. How about $100 for 10 years, same bank and interest?
3. How about $500 per year for the next 30 years, bank pays interest at 8%, compounded annually?

You are buying a BMW for $45,000. You pay $5,000 down and will pay the rest in five annual payments of $11,096.39 beginning one year from today. The payments include interest at 12%. Prepare an amortization schedule.

**How did I get the payment amount?**

**Ending or Unpaid**

**Applied to Principal**

**Periods Payments Interest 12% Principal Balance**

**Total Cost 45,000.00**

**Down Payment 5,000.00 5,000.00 40,000.00**

**1 11,096.39\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**4 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**5 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Sharon wants to buy a new red dress (which her dad and uncle think is way too short and too tight). The cost is $600, 10% down and the rest in 3 equal annual payments which include interest at 8%. How much are the payments? Prepare an amortization schedule.

You want to buy a cow. Price is $10,000 to be paid $1,000 down and the rest in three equal annual installments which include interest at 10%. How much are the payments? Prepare an amortization schedule.

**Professional Tips #2**

The second rule of the negotiator

Never \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. If necessary, \_\_\_\_\_\_\_\_\_\_\_!

**Professional tip #2.1** Always have a H\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ P\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Homework Problems

**Problem 1**

Jane will save for three years. The bank pays interest at 10% compounded semi-annually. How much will she have in three years if she deposits $1,000 today?

**Problem 2**

For Jane (above), what if the bank paid interest annually?

**Problem 3**

How much will you have in three years if you put $100 in the bank today and the bank pays

**A)**  8% compounded annually?

**B)**  16% compounded quarterly?

**C)**  12% compounded semi-annually?

**D)**  24% compounded quarterly**?**

**Problem 4**

What if you put $100 in today and $50 in 6 months from today and another one hundred in at the end of one year. The bank pays 12% compounded semi annually. How much would you have at the end of the second year?

**Problem 5**

If you put $100 in a bank on January 1, 2004, January 1, 2005 and the same amount on January 1, 2006, how much would you have on January 1, 2007 if:

**A)**  the bank pays interest of 6% compounded annually

**B)**  the bank pays interest at 4% compounded semi-annually

**Problem 6**

How much do I need to deposit in the bank today at 8% compounded quarterly so that I will have $100,000 one year from today?

**Problem 7**

How much do I need to invest today at 4% compounded annually in order to have $1,000,000 five years from today?

**Problem 8**

How much do I need to put in the bank today in order to have $10,000 two years from today if interest is 8% compounded semi-annually?

**Problem 9**

John wants to buy a new gas Barbeque. The cost is $659.98. He will have to pay for it

with10% down and 5 equal annual payments that include interest at 10%. Calculate the

payments. Amortize the payments.

**Problem 10**

You, on the other hand, want a new Jeep. The cost is $ 29,000. You pay 5% down and the rest in five equal annual payments which include interest at 8%. Calculate the payments. Amortize the payments.

**Problem 11**

Megan has just purchased a new goat. The cost was $ 1,000. She paid 10% down and will pay the rest in 4 equal annual installments which include interest at 6%. Calculate her payments and prepare an amortization schedule

**Problem 12**

You have just purchased a new car for $40,000. You pay no money down and will make 60 equal monthly payments starting next month. The interest rate is 12% **per year. Amortize the first three months of your loan.** (Be care- did you get $889.78 as your payments?)

OLM – Cash Flows

<https://aspnet.cob.ohio.edu/isms/cobEditPage.aspx?id=1585&page=5240>

**Bobkatz, Inc.**

**Statement of Cash Flows**

**For the Year Ended December 31, 2015**

**Cash flows from operating activities**

**Net Income $119,000**

**Adjustments to reconcile net income**

**to net cash provided by operating activities:**

**Depreciation expense 20,000**

**Increase in net accounts receivable (30,000)**

**Decrease in inventory 10,000**

**Increase** **in accounts payable 3,000**

**Decrease in taxes payable (2,600)**

**Increase in salaries and wages payable 2,000**

**Decrease in interest payable (400)**

**Net Cash Provided by Operating Activities 121,000**

**Explanations and Calculations of the Ratios**

**Susanne Freeland**

*Current Ratio = Working Capital Ratio*

**Current Assets**

**Current Liabilities**

Measure of liquidity – a company has sufficient liquid assets to cover its current obligations.

The higher the ratio the better able a company can meet its current obligations.

***Return on Assets = Net Income***

***Ave. Total Assets***

Measure of how well a company uses its assets to create profits.

The company wants to create a return that satisfies its shareholders (owners).

Investors use this ratio to evaluate company leadership.

***Return on Equity = Net Income***

***Ave. Equity***

Measures the success of company’s financing, investing and operating activities.

A company that generates a high return relative to its shareholders equity is considered a sound investment. The original investors will be repaid with the proceeds from business operations.

***Debt to Equity Ratio = Total Liabilities***

***Total Liab. + Equity***

The more outstanding debt a company has, the more its earnings must go to making the payments on this debt load. This limits the amount of capital available to grow the business or pay dividends to the shareholders.

The more debt a company carries, the more the risk is being born by its creditors.

***Inventory Cost of Goods Sold***

***Turnover Average Inventory***

Average Inventory = Inventory @ BOY + Inventory @ EOY/2

Measures the success a company has in converting (turning) its investment in inventory into sales.

The number of times a company sells and replaces its inventory during a given period.

***Average Days = \_\_ 365\_\_\_\_\_***

***Sales in Inventory Inventory Turn***

The number of days sales, on average, that a firm carries in inventory.

***Acid Test Ratio = Quick Ratio***

***Current Assets - Inventory***

***Current Liabilities***

A stringent test that indicates whether a company has enough current assets to cover immediate liabilities without selling inventory.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Accounts Receivable Turnover*** | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Sales / Average Net Accounts Receivable**  **The number of times the accounts receivable are turned over or are collected**  **during the period.** | | | | | | | | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ***Average Collection Period*** | | | |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **365 days per year / Accounts Receivable Turn**  **The number of days it takes on average to collect an account receivable.** | | | | | | | | | | | | | |  |  |

Earnings Per Share

***Net Income***

***Weighted Average number of shares of common stock***

The dollar amount of earnings that is associated with each share of stock.

Book Value per Share (Liquidation Value)

***Assets – Liabilites (or Owner’s Equity)***

***Number of shares of common stock at the end of the year***

The dollar amount of equity that is associated with each share of stock.

Price Earnings Ratio

***Market Price per share***

***Earnings per share***

This tells you how expensive a share of stock is in relation to its earnings.

**The second residency**

**From the following information for Kevin’s Kennels, prepare a Statement of Cash Flows for the year ended December 31, 2011.**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Balance 12/31/10** |  | **Balance 12/31/11** |
|  |  |  |  |
| Cash | 18,900 |  | 71,900 |
| Accounts Receivable | 45,000 |  | 78,000 |
| Inventory | 90,000 |  | 70,000 |
| Prepaid Insurance | 2,600 |  | 3,600 |
| Equipment | 290,000 |  | 340,000 |
| Accumulated Depreciation | 20,000 |  | 80,000 |
| Land |  |  | 120,000 |
| Security Deposits | 10,000 |  | 12,000 |
| Accounts Payable | 30,000 |  | 35,000 |
| Wages Payable | 10,000 |  | 6,000 |
| Rent Payable | 4,000 |  | 8,000 |
| Interest Payable | 7,500 |  | 6,500 |
| Taxes Payable | 5,000 |  | 10,000 |
| Note Payable | 150,000 |  | 130,000 |
| Common Stock ($1 each) | 160,000 |  | 300,000 |
| Retained Earnings | 70,000 |  | 120,000 |
| Sales |  |  | 1,200,000 |
| Cost of Goods Sold |  |  | 700,000 |
| Wage Expense |  |  | 220,000 |
| Rent Expense |  |  | 48,000 |
| Office Expenses |  |  | 46,000 |
| Depreciation Expense |  |  | 60,000 |
| Utilities Expense |  |  | 15,000 |
| Insurance Expense |  |  | 6,000 |
| Interest Expense |  |  | 15,000 |
| Income Tax Expense |  |  | 27,000 |
|  |  |  |  |

The land was acquired on March 31, 2011 by exchanging 60,000 shares of common stock worth $60,000 and cash for the balance of the purchase price. The additional common stock (other than that issued for the purchase of the land) was sold on September 30, 2011 for $1 per share. The company did not sell any equipment during the year. All equipment purchased during the year was purchased for cash. The retained earnings balance for both years is **after all closing entries** have been made. The Note Payable requires payments of $20,000 principal plus interest at 10% on June 30th of each year. Current stock price (12/31/11) is $4.00 per share.

**Now you do one -**

**The following balances are for Misty Company at December 31,**

20x1 20x2

Cash 10,000 30,000

Accounts Receivable 40,000 50,000

Inventory 80,000 60,000

Prepaid Rent 6,000 3,000

Equipment 180,000 210,000

Accumulated Depreciation-Equipment 50,000 60,000

Security Deposit 8,000 9,000

Accounts Payable 40,000 50,000

Salaries Payable 10,000 -0-

Interest Payable -0- 5,000

Taxes Payable -0- \_\_\_\_\_\_

Note Payable 100,000 70,000

Common Stock 10,000 50,000

Retained Earnings 114,000 124,000

Sales 200,000

Cost of Goods Sold 100,000

Salary Expense 40,000

Rent Expense 24,000

Interest Expense 6,000

Depreciation Expense 10,000

The common stock outstanding was 10,000 shares on January 1, 20x2. On April 1, 20x2, Misty issued 10,000 shares of common stock in exchange for $10,000 of equipment. On July 1, 20x2, Misty sold an additional 30,000 shares of common stock. During 20x2, the company paid a dividend of \_\_\_\_\_\_\_\_\_\_\_\_\_. No equipment was sold during the year. The tax rate is 30% and 1/2 of 20x2 taxes were paid in 20x2.



**Financial Statement Analysis**

**Hermi’s Bumbles, Inc.**

Hermi’s Bumbles is a company that has been in business for three years. The company is a wholesaler of Bumbles. Bumbles are bulbs which grow into beautiful, sweet smelling plant-trees. They are a cross between a hyacinth and a buckeye. They are refrigerated and must be planted within one year of when they are harvested. Hermi buys the bumbles from a grower when they are one month old. Hermi has one location in Columbus, Ohio. It has three refrigerated trucks which deliver the Bumbles throughout Ohio. The financial statements on the previous page summarize Hermi’s operations for its first three years.

Hermi began operations with individuals investing $120,000 for 12,000 shares of common stock and a small business loan of $200,000 from the bank. The loan carries interest at 12%. Hermi must pay the interest plus $10,000 on the principal on January 1 of each year. Hermi sells using terms of 2/10 n/30. The latest sale of stock between individuals was yesterday at $85.00 per share. There are more shares available from the other investors for this amount. The tax rate is 30%.

**Analyzing Hermi’s**

**Current Ratio**

Which tells us?

the A\_\_\_\_\_ T\_\_\_\_\_\_ ratio or Q\_\_\_\_\_\_\_\_\_ ratio is

Calculate the Accounts Receivable Turn for 2010 and 2011

And the average collection period for the two years

Calculate the Inventory Turn

Calculate the Average Days Sales In Inventroy

Calculate Book Value Per Share

*The probability of someone*   *watching you is proportional to the*

*stupidity of your action.*

**Return on Assets** ROA

Which tells us?

**Return on Equity** ROE

Which tells us?

**Leverage**

What causes the difference between the ROA and the ROE??

**Debt to Equity**

Which tells us?

You have decided to open a hot dog stand at the corner of Court and Union. The following is your opening balance sheet. You own the only 50,000 shares of stock outstanding for your company. You sell the dogs for $2.00 each. You pay your worker a fixed salary of $17,000 plus $.10 for each dog she sells.

**Assets**

Cash 5,000

Inventory 10,000

Cart 35,000

Total 50,000

**Liabilities**

-0-

**Owners’ Equity**

Common Stock 50,000

Retained Earnings -0-

Total 50,000

**For the First Year**

Sales 60,000

Cost of Sales 12,000

Gross Margin 48,000

Operating Expenses

Wages 20,000

Other 3,000

Total Operating Expenses 23,000

Operating Income 25,000

Net Income Before Taxes

Tax Expense

Net Income

ROA \_\_\_\_\_\_\_

ROE \_\_\_\_\_\_\_

You paid all your income out as a dividend. You want to expand to Oxford. You will need to invest a total of $60,000. With this investment you will buy a new cart for $37,000 and you will increase your cash to $8,000 and your inventory by $10,000. You will also need to make a security deposit for your spot in Oxford of $5,000. You expect your sales and cogs to double with the new operation. Your wage expense for Oxford will be based the same as it is in Athens.. Your other expenses will increase to $12,000. Your tax rate is 30%. You can either sell 60,000 shares of stock for $1 each or you can borrow the money from the bank. The bank will charge you 8% interest on the loan. Prepare the income statement for next year if you do the deal under each of the alternatives. Assume the deal is done on January 1st.

For the purpose of this analysis, assume the beginning assets are as above and the ending assets are $60,000 higher. Your ending liabilities depend on the option you are analyzing.

**Window Dressing**

Cash $300,000 Accounts Payable $200,000

Accounts Rec 100,000 Other payables 200,000

Inventory 100,000

Total Current Assets 500,000 Total Current Liabilities 400,000

Current Ratio is

Now pay off the Accounts Payable

The Current Ratio is

Back to the Hot Dog Stand

EPS

P\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ E\_\_\_\_\_\_\_\_\_\_\_\_\_ ratio

And the inverse of the Price Earnings Ratio

**Professional tip #3.1** In negotiating, go \_\_\_\_\_\_\_\_\_\_\_ then \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Professional tip #3.2** For Gosh sake, make a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_!!!

` (Does this contradict #1?)

**Professional tip # 3.3** **Honor the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**

**# 3.4 Back to the Restaurant- Show some \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**

**Don’t c\_\_\_\_\_\_\_\_\_\_\_ the \_\_\_\_\_\_\_\_\_\_\_\_\_!!**

**If you can’t a\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ t\_\_ b\_\_ t\_\_\_\_\_\_\_\_\_\_, DON’T G\_\_\_!**

**Homework Problem 1**

**From the following information, prepare a Statement of Cash Flows**

**for the year ended December 31, 2012.**

**The following data is for Molly’s Munchies:**

**Balance Balance**

**12/31/11 12/31/12**

Cash 20,000 80,000

Accounts Receivable 35,000 68,000

Inventory 90,000 70,000

Prepaid Insurance 3,000 500

Equipment 270,000 340,000

Accumulated Depreciation 20,000 80,000

Land 120,000

Security Deposits 10,000 12,000

Accounts Payable 30,000 35,000

Wages Payable 10,000 6,000

Rent Payable 6,000 7,500

Interest Payable 7,000 6,000

Taxes Payable 5,000 16,000

Note Payable 140,000 120,000

Common Stock ($1 each) 160,000 300,000

Retained Earnings 50,000 120,000

Sales 1,200,000

Cost of Goods Sold 575,000

Wage Expense 260,000

Rent Expense 24,000

Office Expenses 70,000

Depreciation Expense 60,000

Advertising Expense 15,000

Insurance Expense 9,000

Interest Expense 14,000

Income Tax Expense 52,000

Some of the equipment was acquired on March 31, 2012 by exchanging 60,000 shares of common stock worth $60,000. The additional common stock (other than that issued for the purchase of the equipment) was sold on June 30, 2012 for $1 per share. The company did not sell any equipment during the year. All the rest of the equipment and the land purchased during the year was purchased for cash. The retained earnings balance for both years is after all closing entries have been made. The Note Payable requires payments of $20,000 principal plus interest at 10% on June 30th of each year. Current market price is $5.00 per share

**The Second Accounting Project**

**You are to pick a publically traded company and prepare a financial analysis of the company based on the ratios you have learned. Your interpretation of the ratios is to be from a creditor side and then from an investor perspective.**

Managerial Element

We have been studying Financial Accounting

Which deals with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Managerial accounting is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Cost Behavior

Fixed Costs

Variable Costs

Now go back to the Hot Dog Stand

You have decided to open a hot dog stand at the corner of Court and Union. The following is your opening balance sheet. You own the only 50,000 shares of stock outstanding for your company. You sell the dogs for $2.00 each. You pay your worker a fixed salary of $20,000 plus $.10 for each dog she sells.

(Pge 190)

**Assets**

Cash 5,000

Inventory 10,000

Cart 35,000

Total 50,000

**Liabilities**

-0-

**Owners’ Equity**

Common Stock 50,000

Retained Earnings -0-

Total 50,000

**For the First Year**

Sales 60,000

Cost of Sales 12,000

Gross Margin 48,000

Operating Expenses

Wages 23,000

Other 10,000

Total Operating Expenses 33,000

Operating Income 15,000

We now redo the income statement using the **Contribution Margin** format

How many hot dogs do you need to sell to break even?

Per Year

Per Month Per Week Per Day Per Hour

Acme Company sells anvils and the following is per anvil

Unit Selling Price $20

Variable Costs 12

Total fixed costs $ 400,000

Total volume 100,000 units

Prepare an income statement using the contribution margin format

What is Acme’s Break Even point in units

In $

Using the contribution margin % to calculate Break-even in dollars

Now assume that Acme wants to make $1,000,000 per year. How many anvils does the company need to sell to accomplish this (in units and dollars).

The relevant range

The CFO of Garven Company provides the following per-unit analysis, based on a volume of 100,000 units

Selling Price $30

Variable Costs $12

Fixed Costs 9

Total Costs 21

Profit per unit $ 9

Answer each of the following questions independent of your answers to the other questions

1. What total profit does Garven expect to earn?
2. What would be the total profit at 110,000 units?
3. What is the break-even point in units?

1. Garven’s managers think they can increase volume to 120,000 units by spending an additional

$ 60,000 on salespeople. What total profit would they earn if they make this move?

Homework

**Problem 1. Salmon Company** makes Things. Things sell for $30 each and cost $12 each to make. Fixed costs are estimated to be $1,500,000 next year.

What is the breakeven point for Salmon based on the above information

How many Things must Salmon sell to make $1,200,000 next year?

**Problem 2** Billy Bob’s has given you the following income statement for June 2013.

Sales $ 500,000

Cost of goods sold 300,000

Gross margin 200,000

Operating expenses:

Salaries and commissions $ 80,000

Utilities 20,000

Rent 22,000

Other 18,000

Total operating expenses 140,000

Income 60,000

Billy Bob sells one product, a running shoe for $100 per pair. A 10% sales commission, included in Salaries and commissions is the only other variable cost. The manager tells you that this financial statement is not very helpful to her.

Redo the income statement using the contribution margin format.

For Billy Bob’s determine the break-even in sales dollars and units

Susie is the new manager of Acme Clothing. The controller has given her the following information based on expected operations for the coming year.

Shirts Pants Pullovers

Selling Price $ 20 $ 30 $ 60

Variable Costs 10 12 15

Contribution Margin 10 18 45

Sales mix percentage, in dollar sales 50% 30% 20%

Total fixed costs are $1,189,000

What is the weighted average contribution margin?

What is the break-even in sales?

At the break-even point, how many of each item will be sold?

The CEO wants a profit of $800,000. Determine the sales needed to achieve this goal?

The sales manager believes she can increase the sales of any of the three products by 20% by spending $25,000 in advertising on that product. Which product should she choose for the promotion?

Cleveland Cliffs produces three models of gel pens, regular, silver and gold. Price and costs of the three are as follows

Regular Silver Gold

Selling Price $ 20 $ 30 $60

Variable Costs 12 15 21

Monthly fixed costs are $600,000

Suppose the sales mix is Regular 50%, Silver 30% and Gold 20%

What is the breakeven in sales dollars?

How much must the sales volume be to make $300,000 per month?

**Professional tip** In negotiations, use T\_\_\_\_\_\_\_\_\_\_\_ as a T\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Professional Tip** The urge to talk is the urge to r\_\_\_\_\_\_\_\_\_\_\_\_\_\_ c\_\_\_\_\_\_\_\_\_\_\_\_\_.

Homework

**Problem 1. Jenkins company** sells three different laundry baskets. The controller has prepared the following estimates for next year

**A B C**

Selling Price $12 $20 $30

Variable Costs 4 5 8

Estimated sales mix 60% 30% 10%

Estimated Fixed Costs $1,590,000

What is the weighted average contribution margin?

How many of each of the laundry baskets does Jenkins have to sell for the company to make $1,600,000?

**Problem 2. Freeland Company** makes three products, Alpha, Beta, and Gamma

Below are the income statement for two recent months:

May June

Sales $160,000 $120,000

Costs 120,000 104,000

Net Income 40,000 16,000

Selling price and cost data by product are as follows.

**Alpha Beta Gamma**

Selling Price $40 $20 $10

Variable costs 16 6 6

Contribution margin 24 14 4

Sales mix (in dollars) 40% 40% 20%

How many of each of the laundry baskets does Jenkins have to sell for the company to make $1,600,000?

**Problem 2. Freeland Company** makes three products, Alpha, Beta, and Gamma

Below are the income statement for two recent months:

May June

Sales $160,000 $120,000

Costs 120,000 104,000

Net Income 40,000 16,000

Selling price and cost data by product are as follows.

**Alpha Beta Gamma**

Selling Price $40 $20 $10

Variable costs 16 6 6

Contribution margin 24 14 4

Sales mix (in dollars) 40% 40% 20%

1. Determine the break-even point in dollars\*
2. Which product is most profitable per unit sold?
3. Which product is most profitable per dollar of sales?
4. What sales dollars are needed to earn $70,000 per month, and how many units of each product will be sold at that sales level if the usual mix is maintained?
5. The sales manager believes that he could increase sales of Gamma by 10,000 units per month if more attention were devoted to is and less to Beta. Sales of Beta would fall by 2,000 units per month. What change in income would occur if this action were taken?
6. July sales were $200,000 with a mix of 40% Alpha, 30% Beta and 30% Gamma. What was the income?

1. Suppose the company is currently selling 12,000 units of Gamma. Because this is the least profitable product, management believes it should be dropped from the mix. If Gamma is dropped, it is expected that sales of Beta would remain the same and those of Alpha would rise. By how much would sales of Alpha have to rise to maintain the same total income?

**\***(Did you figure out that the fixed costs were $56,000? If yes, you are really good. If no, use the $56,000 as fixed costs anyway).

**Problem 3**

**Once upon a time the following add appeared in the Athens newspaper-**

**For Sale: Apartment Building**

**30 Units**

**Average Rent for 2011 is expected to be $600 per month per unit**

**2 years old**

**Price \_\_\_\_\_\_\_\_\_\_**

Upon investigation you found that it would require little or no work on your part. There was a rental agency which would keep the books, rent apartments, do evictions and other administrative tasks for 10% of the rent. Your investigation showed that the apartments stayed about 90% occupied and that occupancy rate is likely to continue. Additionally, the rental agency told you that you can expect rents to increase about 5% per year after 2011 year for the following three years (2012, 2013, 2014) because the building is new. The repairs and maintenance costs are about $800 per month for 2011, 2012, 2013, and 2014. You want to earn at least 20% on your investment. You figure you will hold on to the apartment for four years and then sell it for $600,000 (on Dec 31, 2015). All other cash expenses run $1,000 per month and will rise at 5% per year after 2011. **Assume it is Jan 1, 2011- what is the price you would pay for the apartment? Ignore taxes.**