***Hello Students**...As we embark on a new journey of distance learning we will try our test to use technology to our advantage. If you have access to a cell phone, tablet or computer with internet, you may complete these assignments online. If not, there are printed copies for you to complete at home. I am only an email away if you have any questions. May we all stay safe and virus free! -Ms. Corkin*
kcorkin@cps18.org

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Each lesson has a Reading portion along with a Reading Quiz and Math Quiz to complete.

Analyzing Financial Statements

As you learned in a previous lesson, the worksheet is a useful tool that displays a great deal of informatio on one page. However, when managers are looking at certain aspects of their business in order to identif

trends, they use a number of different financial statements, most notably the balance sheet, income statement, statement of retained earnings, and cash flow statement. Public corporations are required to have these financial statements audited and published in their annual reports.

Income Statement

A company succeeds or fails based on its ability to make money. The income statement, created in step six of the accounting cycle, shows whether a company is making or losing money. It is the first financial statement created, as its information is used in other statements.

Although part of the worksheet, the income statement, taken as a stand-alone financial document, can display income results for one month, multiple months, or multiple years. That enables managers to track trends and make better, more-informed business decisions to help grow the company.

In its simplest form, the income statement displays all of a company's revenues and expenses on one document. By subtracting all of a company's expenses from all of its revenues, a company can determine its **net income** (if revenues exceed expenses) or **net loss** (if expenses exceed revenues). In general, the greater the net income, the better the company is performing.

It is important to note that a net income doesn't always mean a company is performing well. If the income statement shows that net income is trending downward, for example, the company may be experiencing hardships even while sti reporting a positive income. Or maybe the net income being reported is lower than net incomes being reported by othe companies in the same industry; this also reveals inefficiencies.

Displayed is an example of a multi-month income statement. As you can see, it is easy to compare revenues, expenses, and incomes from prior time periods in this format.

A few terms displayed here need some additional explaining. **Cost of sales** (or cost of goods sold) is used as an expense item that indicates how much money the item being sold cost the business. Subtracting cost of sales from revenue produces **gross margin** (or gross profit). The gross margin tells a manager the profitability of the sale before other expenses are subtracted.

EBIT stands for “earnings before interest and taxes.” Many businesses like to know how much money they made befo any taxes and interest are subtracted. Net is the final net income.

Statement of Retained Earnings

Although the statement of retained earnings does not contain a great deal of information, it shows a manager the growth or reduction in a company’s equity. Retained earnings are the portion of stockholders’ (owners’) equity created by earning net income and retaining related resources in the business.

An updated retained earnings statement is computed by adding net income to the beginning balance of retained earnings (or subtracting a net loss), then subtracting any dividends paid out to shareholders. (Note how it’s impossible to create a statement of retained earnings without the net income figure obtained from the income statement.)

The Balance Sheet

Because the balance sheet uses information from the statement of retained earnings, and the statement of retained earnings can only be created with a complete income statement, the balance sheet is by necessity the last of these three documents to be created.

Why is it called the balance sheet? We have already learned that businesses need to make sure the accounting equation always balances—that is, total assets should always equal total liabilities plus stockholders’ equity.

But why should they equal? It is because the two sides of the balance sheet represent two sides of the business. Assets show what a business owns. The liabilities and stockholders’ equity show who supplied those assets to the business (creditors or the owners). Therefore claims of the creditors and owners will equal that of all the assets.

Cash Flow Statement

Businesses need to know much more about how cash is coming in and flowing out than just the cash line on the balance sheet. The **cash flow statement** provides that detail.

Does the business have enough cash to make payroll? Does the business have enough cash to purchase a new building? Is there a creditor it has to pay back soon? These kinds of questions can be answered with the help of a cash flow statement.

Payments and receipts of cash in a business can be divided among three categories: operating activities, financing activities, and investing activities.

Operating Activities

Operating activities refers to how cash flows in and out of the business due to product sales or company services. When sales are strong or when receivables are collected, cash goes up. Cash goes down when a business pays employees, buys supplies, or has other expenditures.

Investing Activities

Investing activities include cash transactions that involve plant assets (buildings and machinery) and loans made.

Financing Activities

Businesses sometimes need to take out loans or seek additional capital from investors in order to finance their business. Paying back the loans or paying dividends to owners reduces the cash in the business.

Take these three categories of cash activities and put them into one document to get the cash flow statement. These statements show very clearly how cash is flowing in and out of a business.

A business that sees most of its positive cash flow coming from operations would be pleased. But a reader of a cash flow statement must also be able to look beyond the numbers. For example, a negative cash flow would seem to indicate that a business is in trouble—but not if the negative cash flow is to pay for a new factory built to handle the

booming sales. One must look very carefully at the cash flow statement to get the full story of how a business is performing.

Key Terms

cash flow statement: One of the quarterly financial reports publicly traded companies are required to disclose to the SEC and the public. The document provides aggregate data regarding all cash inflows from both ongoing operations and external investment sources as well as all cash outflows for business activities and investments.

cost of sales: Also referred to as “cost of goods sold,” the direct costs attributable to the production of the goods sold by a company. This includes both the materials and the direct labor costs used to produce the good. It excludes indirec expenses such as distribution and sales force costs. Cost of sales appears on the income statement and can be deducted from revenue to calculate a company’s gross margin.

EBIT: Earnings before interest and taxes—an indicator of a company’s profitability, calculated as revenue minus expenses, excluding tax and interest. EBIT is also referred to as “operating earnings,” “operating profit,” and “operating income.”

financing activities: A category in a company’s cash flow statement that accounts for external activities that enable a firm to raise capital and repay investors, such as issuing cash dividends, adding or changing loans, or issuing stock. Cash flow from financing activities shows investors the company’s financial strength. A company that frequently turns t new debt or equity for cash, for example, could have problems if the capital markets become less liquid.

gross margin: A company’s revenue minus its cost of goods sold. Gross margin is a company’s residual profit after selling a product or service and deducting the cost associated with its production and sale. Also called “gross profit” or “gross income.”

investing activities: An item on the cash flow statement that reports the aggregate change in a company’s cash position resulting from any gains (or losses) from investments in the financial markets and operating subsidiaries and changes resulting from money spent on investments in capital assets such as buildings and equipment.

net income: A company’s total earnings (or profit). Net income is calculated by taking revenues and adjusting for the cost of doing business, depreciation, interest, taxes, and other expenses. This number is found on a company’s incom statement and is an important measure of how profitable the company is over time.

net loss: When expenses exceed income or total revenue produced for a given period of time.

operating activities: An accounting item indicating the money a company brings in from ongoing, regular business activities, such as manufacturing and selling goods or providing a service.

Math

Examples

The math problems in this curriculum are intended as practice in applying math concepts to the real world. The concepts included are generally those covered through Algebra I.

While this curriculum is not intended as a substitute for standard math courses, several review tools are included.

Below you will find example questions very similar to those on the math quiz for this lesson. A complete solution is given for each example. On your course homepage, a Math Concepts Reference link is included beneath the Tutorial. This reviews key mat concepts as well as business and financial formulas.

Example Questions

1. Company A has revenues of $46,555 and $55,421 for the years 2018 and 2019, respectively. Company B has

revenues of $875,650 and $945,250 for the years 2018 and 2019, respectively. Which company is growing faster b percentage growth rate?

SOLUTION:

For each company, divide 2019 revenue by 2018 revenue, subtract 1 and multiply by 100. Company A's growth rate is 19%; Company B's growth rate is 8%.

2. A company's revenue shrinks by 25% from 2018 to 2019. How much must it grow by in 2020 to reach its 2018 leve

SOLUTION:

If R equals 2018 revenue, then R x (1 - 0.25) = .75R = 2019 revenue. If 2020 revenue climbs back to R, then growth rate is (R / .75R - 1) x 100 = 33.33%

Analyzing Financial Statements Reading Quiz

1. Which financial statement is created last?

a) statement of retained earnings b) balance sheet c) income statement

2. Dividends appear on which financial statement?

a) statement of retained
earnings b) balance sheet c)
income statement

3. Retained earnings appears on how many financial statements?

a)
1
b)
2 c)
3

4. Will borrowing money from a bank increase or decrease cash in a business?

a) increase
b)
decrease

5. True or false: Liabilities should always be equal to total assets minus stockholders' equity.

a) true
b)
false

6. The income statement is created in what step in the Accounting Cycle?

a)
4
b)
5 c)
6
d)
7

7. Revenue is synonymous with:

a) Net income b)
Sales c) Profit d)
Retained Earnings

8. Cost of Goods Sold is classified as a:

a) Revenue account b) Expense account c) Asset account d) Equity account

9. Gross margin is calculated by:

a) Sales minus expenses b) Sales minus liabilities c) Sales minus Cost of Goods Sold

10. An example of Operating Activities in a cash flow statement includes:

a) Purchase of factory building b) Collection of Accounts Receivable c) Repayment of loan d) Sale of stock

Analyzing Financial Statements Math Quiz

1. An industry benchmark for marketing expense is 12% of revenue. Your revenue is $12,000,000. According to the benchmark, how much should you be spending on marketing?

a) $1,200 b) $144,000 c) $1,440,000 d) $14,400,000

2. Your balance sheet shows assets of $10,000, short-term liabilities of $8,000 and long-term liabilities of $6,000. Is this possible and why?

a) No, since assets = liabilities plus equity, this means equity is negative which is not possible b) Yes,

since assets = liabilities plus equity, this means equity is negative which is quite common in new businesses with loans.

3. Your revenues are growing 20% per year but your expenses are growing 30% per year. Is your profit percentage increasing or decreasing?

a) Increasing
b) Decreasing c) Can't Tell

4. Your revenues are growing 20% per year but your expenses are growing 30% per year. Is your dollar profit increasing or decreasing?

a) Increasing
b) Decreasing c) Can't Tell

5. A company had net income of $5M and issued $6M of dividends. What happened to the company's retained earnings ?

a) Increased $1M
b) Decreased $1M
c) Stayed the same

6. Company A has revenues of $612,566 and $686,554 for the years 2018 and 2019, respectively. Company B has revenues of $123,265 and $194,222 for the years 2018 and 2019, respectively. Which company would you invest in if you only had this information?

a) Company A b) Company B c) Either one as they are growing at the same rate

7. A company's revenue shrinks by 30% from 2018 to 2019. And its 2018 revenue was 1,000,000 and its expenses shrink 35% from the same time period. And its expenses were $800,000 in 2018. What was the 2019 net income or net loss in dollars?

a)

$200,000
b) $20,000
c) $180,000

8. If a company had a retained earnings balance of $100,000 at the start of the year and the company had a net income of $25,000, paid out dividends of $7,000 and had a gross profit of $90,000, what was the company's operating expenses?

a)
$10,000
b)
$65,000 c)
$58,000
d)
$22,000

9. True or False: Your revenues grew 20% this year, your cost of sales increased 10% this year and your operating expenses remained the same. Therefore, net income rose 10%.

a) True b)
False c)
Can't Tell

10. A company had a gross profit of $8M, sales of $15M, net income of $5M, cost of sales $7M, and issued $5M of dividends. What happened to the company's retained earnings?

a) Increased $1M
b) Decreased $1M
c) Stayed the same

Managerial Accounting I

Managerial accounting refers to accounting activities that help internal managers manage a company.

There are many, many aspects of managerial accounting. In this lesson, you will take close look at one aspect, cost accounting. It is very difficult for a business to make a profit without knowing how much the product or service it sells costs to produce. Before a company can put a price tag on a product or a service, it must determine what it spends to create or provide it and figure out how to maximize the profit potential. This is called cost accounting.

Financial vs. Managerial Accounting

Until now our lessons have focused on financial accounting, where the emphasis is on gathering information about the financial resources, obligations, and activities of an enterprise primarily for use by external decision makers, investors, and creditors.

Managerial accounting, on the other hand, is used by internal managers to make decisions about day-to-day business operations. It is based not on past performance but on current and future trends. Because managers often have to make quick decisions in a fast-changing environment, managerial accounting relies heavily on forecasting of markets and trends.

There are many aspects to managerial accounting, including budgeting, inventory valuation, and cost accounting. In th lesson, we'll take a close look at cost accounting, which provides the means to compute the cost of products or service at a manufacturing or service enterprise. These costs will be used to determine the price of products. (In the next lesson, we'll look at two other areas of managerial accounting: trend analysis and incentive systems.)

Cost Accounting Systems

A prime example of managerial accounting is the use of a cost accounting system. These perform a critical function: they help a business keep track of how much it spends to make a product or provide a service. This in turn decides an all-important number: the price a company should charge for that product or service in order to remain competitive yet still make a profit.

Job-Order Costing

A common cost accounting system is **job-order costing**. This system is used when each job is unique or different in some way. (Coca-Cola wouldn't use this system, for example, as the Coke bottles they make are all exactly alike.)

Knowing the true cost of a product or service makes possible many other business decisions that will help the busines achieve financial success. When identifying the total cost of a job, there are usually three categories of costs a compa must calculate and add together. Let's look at each.

Direct Labor
Employees immediately involved in creating a product or providing a service (for example, assembly-line workers or carpet installers) are considered **direct labor**. (Anyone not directly working on a product or service, like a supervisor o security guard, is considered **indirect labor**. Indirect labor is an example of the third category of costs, overhead, whic we'll talk about shortly.)

In many businesses, labor is the largest cost, so it is imperative to track its cost closely. Businesses do this using two tools: (1) the **time sheet** and (2) the **job cost sheet**.

The time sheet is used by employees who work directly on jobs. It notes how long they work on a specific job each day They do that by noting not only the time but also the job number.

In the illustration, you can see the four entries an employee made January 31. The second entry was for job J369 for 6.5 hours. The green arrow illustrates how the job number on the time sheet corresponds to the job number on the job cost sheet for that same job.

The red arrow indicates where the hours worked on the time sheet would be recorded on the job cost sheet. The number of hours worked would be multiplied by the hourly rate that employee is paid to get labor costs.

Direct Materials

Businesses that offer a service may find itself doing different jobs for different customers, with each job requiring a different set of parts. These parts cost money and need to be factored into the entire cost of the job, so businesses need to track materials used on each job. Physical items used like this to make a product or deliver a service are calle **direct materials**.

Direct materials are tracked using a **materials**

requisition form. This form requires the job number and a list of the materials used; the total materials cost is added to that job's cost order sheet.

Overhead

All costs other than materials and direct labor are considered **overhead** costs: heat and electricity, maintenance, insurance, and depreciation are all overhead costs. Without considering overhead costs, a business would think its product or service is much cheaper than it actually is.

Overhead is a little harder to calculate. Most businesses estimate overhead costs by using a rate. For example, if labo is the **cost driver** for a business and overhead is charged at a rate of 150%, what would overhead be if $10,000 in direct labor was used? The answer is 1.5 x $10,000, or $15,000 in overhead costs.
Once a job order cost system is implemented, the actual cost to make a product or perform a service will be identified on the job cost sheet when the job is finished. That cost should be compared to the price the customer pays to determine how profitable the job was.

Pricing

A business owner must consider a variety of factors when determining the price to charge for a product or service. Here are a few of them.

Cover Your Costs

As we've discussed, a business needs to know what each product costs to make or how much a service costs to deliver. The price you charge your customers should at the very least cover your total costs.

Find the Market Value

Once you know what your service or product costs to make, you can conduct research to discover the market value of your product or service—that is, what people will pay for it. Something that provides a lot of value can be priced much higher than its cost, and you don't want to sell yourself short; this is called value pricing.

Know the Competition

A good business manager researches competitors. How does your product differ from theirs? Is there a difference customers will pay for? How many competitors are there? These all factor into the selling price.

Use Psychological Pricing

Setting too low of a price can actually decrease demand for your product because price is often an important economic signal for a product's value. Think of shoes, clothing, and handbags. Here, expensive products often are more desirab than the cheaper alternatives, so people may think an inexpensive product is low quality even if it's not.

Pricing should also make sense to the customer. Charging $12 a year for something would probably work better than charging $10 a year for it because a customer can easily break down $12 a year to a charge of $1 per month. Psychologically, the consumer may better understand the deal.

Key Terms

cost driver: Anything that triggers a significant change in the cost of an activity or good. The concept is most common used to assign overhead costs to a number of produced units.

direct labor: When a businesses manufactures goods, direct labor is the labor of the production crew, such as machin operators, assembly line operators, and painters. When a business provides services, direct labor is the labor of those who provide services directly to customers, such as consultants or lawyers.

direct materials: The traceable matter used in manufacturing a product. The direct materials for a manufacturer of dessert products, for example, might include flour, sugar, eggs, and milk.

indirect labor: The cost of any labor that supports the production process but is not directly involved in converting materials into finished products.

job cost sheet: A document used to record manufacturing costs; it is prepared by companies that use job-order costin systems to compute and allocate costs to products and services.

job-order costing: A system for assigning manufacturing costs to individual products or batches of products. General the job-order costing system is used only when the products manufactured are sufficiently different from each other.

materials requisition form: A document used to request materials for manufacturing or for providing services.

overhead: All ongoing business expenses not including or related to direct labor, direct materials, or third-party expenses billed directly to customers. Overhead is paid for on an ongoing basis whether a company does a high or low volume of business. It is important not just for budgeting purposes but also for determining how much a company mus charge to make a profit.

time sheet: A method for recording the amount of a worker's time spent on each job.

Math Examples

The math problems in this curriculum are intended as practice in applying math concepts to the

real world. The concepts included are generally those covered through Algebra I.
While this curriculum is not intended as a substitute for standard math courses, several review tools are included.
Below you will find example questions very similar to those on the math quiz for this lesson. A complete solution is given for each example. On your course homepage, a Math Concepts Reference link is included beneath the Tutorial. This reviews key mat concepts as well as business and financial formulas.

Example Questions

1. You have found that for a given price, P, your revenue, R, is given by the function R=2750 - 1500 x (P - 4) . Your
calculus teacher tells you that functions are maximized when their derivative is set equal to zero. The derivative of your function is 2750 x (P - 4). What price maximizes revenue.

SOLUTION:

3000 x (P - 4) = 0 P - 4 = 0 P = 4

2. You know that the direct cost of your product is $3.50. You want to have a gross margin of 37%. What should your
price be?

SOLUTION:

(P - 3.50) / P = .37 P - 3.50 = .37P P - .37P = 3.50 .63P = 3.50 P = $5.56

Managerial Accounting I Reading Quiz

1. What are the methods and techniques used by businesses to track costs to deliver products and/or services called
?

a) overhead accounting b) cost-control systems c) cost-accounting systems d) cost systems

2. What are the three categories of costs a company should track to measure how much their product or service costs?

a) overhead, indirect labor, direct materials
b) direct labor, direct materials, overhead c) indirect materials, indirect labor, overhead

3. A janitor cleaning a production facility would be considered:

a) direct labor.
b) overhead.
c) asset.

4. Which of the following is NOT true regarding job cost sheets?

a) A separate job cost sheet is prepared for each job. b) A job cost sheet is a method for recording the hours worked by an employee on a given day. c) Costs accumulated on a job cost sheet include direct materials, direct labor, and overhead. d) A job cost sheet is used to compute costs of production.

5. Managerial Accounting allows:

a) Managers to debit the correct accounts b) Managers to evaluate a trial balance c) Managers to use financial information to make business decisions

6. Financial Accounting allows businesses to:

a) gather and organize financial transactions to publish for managers b) develop cost accounting systems c) implement job-order costing systems

7. Overhead is usually calculated:

a) tracking each indirect labor worker b) estimating the cost using a rate c) identifying the material waste not used in production

8. How does a business identify how much profit was made on a job?

a) Compare the job cost sheet to the price the customer paid b) Making sure enough money is collected to pay overhead c) Add up Overhead and Materials and compare to the price the customer paid

9. Direct Labor can be an activity used as a cost driver to calculate:

a) Overhead b)
Sales c)

Material costs

10. A job cost sheet will measure:

a) Direct materials, Direct labor and Overhead
b) Direct materials, Indirect labor and Overhead
c) Indirect materials, Indirect labor and Overhead

Managerial Accounting I Math Quiz

1. Your plant produces 100 snowmobiles per month. Direct costs are $2,000 per snowmobile. Monthly overhead is $90,000. What is the average cost per snowmobile with overhead?

a) $2,000
b) $2,900
c) $29,000
d) $92,000

2. If overhead is applied to individual jobs at a rate of 60% of direct labor costs incurred per job, and $40,000 in materials were used and $15,000 of direct labor was required - what was the overhead costs charged to the job? a) $9,000
b) $24,000 c) $30,000
d) $55,000

3. In value pricing your products, you have found that for a given price, P, your revenue, R, is given by the function $R=2000 - 1000 \times (P - 2)^2$. What is your revenue for a price of $2.50?

a) $1000
b) $1,750 c) $2,000

d)
$2,250

4. In value pricing your products, you have found that for a given price, P, your revenue, R, is given by the function $R=2000 - 1000 \times (P - 2)^2$. Which of the following prices gives the highest revenue?

a) $1.50
b) $2.25
c) $2.50
d) $2.75

5. You have found that for a given price, P, your revenue, R, is given by the function $R=2000 - 1000 \times (P - 2)^2$. Your calculus teacher tells you that functions are maximized when their derivative is set equal to zero. The derivative of your function is $2000 \times (P - 2)$. What price maximizes revenue.

a)
$1.75
b)
$1.95 c)
$2.00
d)
$2.25

6. A coating machine costs $125,000. The coating solution costs $.15 per piece. You expect the coating machine to coat 50,000 parts over its useful life. What is the machine cost per part?

a)
$1.50
b)
$2.35 c)
$2.50
d)
$2.65

7. In your computer repair business, it takes an employee 40 minutes to remove a virus. The employee is paid $14 per hour. If the employee worked 4 hours and 40 minutes removing viruses, what is the employee owed for this service?

a) $9.33
b)

$14.00 c)
$56.00
d)
$65.33

8. In your computer repair business, the average employee removes 12 viruses per day on an eight hour per day work schedule. Employees earn $14 per hour. How many viruses would an employee remove on average if they worked 48 hours?

a) 48
b) 96
c)
576
d) 72

9. Your company pays time and a half for every overtime hour worked after 40 hours. If one of your employee's time sheets indicated she worked 49 hours and is paid $15/hour, what was her gross pay for the week?

a) $735 b)
$802.50 c)
$600 d)
Can't tell

10. Details on various costs involved in manufacturing 2,000 bike racks include: overhead is estimated to be $300,000, direct materials $400,000, indirect materials $100,000, direct labor $300,000 and indirect labor $75,000. What would accountants calculate the cost to produce the bike racks to be?

a)
$1,100,000
b)
$1,175,000
c)
$1,000,000
d)
$1,075,000