

ESERCIZI

1 MANUFACTURING FIRM INCOME STATEMENT

Slapshot Company makes ice hockey sticks and sold 16,000 sticks during the month of June at a total cost of \$485,000. Each stick sold at a price of \$90. Slapshot also incurred two types of selling costs: commissions equal to 15 percent of the sales price, and other selling expense of \$200,000. Administrative expense totaled \$115,000.

Required:

Prepare an income statement for Slapshot for the month of June.

2 INCOME STATEMENT PERCENTAGES

Slapshot Company makes ice hockey sticks and sold 16,000 sticks during the month of June at a total cost of \$485,000. Each stick sold at a price of \$90. Slapshot also incurred two types of selling costs: commissions equal to 15 percent of the sales price, and other selling expense of \$200,000. Administrative expense totaled \$115,000.

Required:

Prepare an income statement for Slapshot for the month of June and calculate the percentage of sales revenue represented by each line of the income statement. Round answers to one decimal place.

3 SERVICE ORGANIZATION INCOME STATEMENT

Allstar Exposure designs and sells advertising services to small, relatively unknown companies. Last month, Allstar had sales commissions costs of \$50,000, technology costs of \$75,000, and research and development costs of \$200,000. Selling expenses were \$10,000, and administrative expenses equaled \$35,000. Sales totaled \$410,000.

Required:

Prepare an income statement for Allstar for the past month.

4 CUSTOMER VALUE, STRATEGIC POSITIONING

Adriana Alvarado has decided to purchase a personal computer. She has narrowed the choices to two: Drantex and Confiar. Both brands have the same processing speed, 6.4 gigabytes of hard-disk capacity, two USB ports, a DVD drive, and each comes with the same basic software support package. Both come from mail-order companies with good reputations. The selling price for each is identical. After some review, Adriana discovers that the cost of operating and maintaining Drantex over a three-year period is estimated to be \$300. For Confiar, the operating and maintenance cost is \$600. The sales agent for

Drantex emphasized the lower operating and maintenance costs. The agent for Confiar, however, emphasized the service reputation of the product and the faster delivery time (Confiar can be purchased and delivered one week sooner than Drantex). Based on all the information, Adriana has decided to buy Confiar.

Required:

1. What is the total product purchased by Adriana?
2. How does the strategic positioning differ for the two companies?
3. When asked why she decided to buy Confiar, Adriana responded, "I think that Confiar offers more value than Drantex." What are the possible sources of this greater value? What implications does this have for the managerial accounting information system?
4. Suppose that Adriana's decision was prompted mostly by the desire to receive the computer quickly. Informed that it was losing sales because of the longer time to produce and deliver its products, the management of the company producing Drantex decided to improve delivery performance by improving its internal processes. These improvements decreased the number of defective units and the time required to produce its product. Consequently, delivery time and costs both decreased, and the company was able to lower its prices on Drantex. Explain how these actions translate into strengthening the competitive position of the Drantex PC relative to the Confiar PC. Also discuss the implications for the managerial accounting information system.

5 COST ASSIGNMENT

The sales staff of Central Media (a locally owned radio and cable television station) consists of two salespeople, Derek and Lawanna. During March, the following salaries and commissions were paid:

	<i>Derek</i>	<i>Lawanna</i>
Salary	\$25,000	\$30,000
Commissions	6,000	1,500

Derek spends 100 percent of his time selling advertising. Lawanna spends two-thirds of her time selling advertising and the remaining one-third on administrative work. Commissions are paid only on sales.

Required:

1. Accumulate these costs by account by filling in the following table:

<i>Cost</i>	<i>Selling Costs</i>	<i>Administrative Costs</i>
Derek's salary Lawanna's		
salary Derek's		
commissions Lawanna's		
commissions Total		

6 PRODUCTS VERSUS SERVICES, COST ASSIGNMENT

Holmes Company produces wooden playhouses. When a customer orders a playhouse, it is delivered in pieces with detailed instructions on how to put it together. Some customers prefer that Holmes puts the playhouse together, and they purchase the playhouse plus the installation package. Holmes then pulls two workers off the production line and sends them to construct the playhouse on site.

Required:

1. What two products does Holmes sell? Classify each one as a product or a service.
2. Do you think Holmes assigns costs individually to each product or service? Why or why not?
3. Describe the opportunity cost of the installation process.

7 COST CLASSIFICATION

Loring Company incurred the following costs last year:

Direct materials	\$216,000
Factory rent	24,000
Direct labor	120,000
Factory utilities	6,300
Supervision in the factory	50,000
Indirect labor in the factory	30,000
Depreciation on factory equipment	9,000
Sales commissions	27,000
Sales salaries	65,000
Advertising	37,000
Depreciation on the headquarters building	10,000
Salary of the corporate receptionist	30,000
Other administrative costs	175,000
Salary of the factory receptionist	28,000

Required:

1. Classify each of the costs using the table format given below. Be sure to total the amounts in each column. The row for «Direct materials» is filled in as an example.

Costs	<i>Product Cost Period Cost</i>				
	<i>Direct</i>	<i>Direct</i>	<i>Manufacturing</i>	<i>Selling</i>	<i>Administrative</i>
			<i>Labor</i>	<i>Overhead</i>	<i>Expense</i>
Direct materials	\$216,000				

4

2. What was the total product cost for last year?
3. What was the total period cost for last year?
4. If 30,000 units were produced last year, what was the unit product cost?

8 CLASSIFYING COST OF PRODUCTION

A factory manufactures jelly. The jars of jelly are packed six to a box, and the boxes are sold to grocery stores. The following types of cost were incurred:

- Jars
- Sugar
- Fruit
- Pectin (thickener used in jams and jellies)
- Boxes
- Depreciation on the factory building
- Cooking equipment operators' wages
- Filling equipment operators' wages
- Packers' wages
- Janitors' wages
- Receptionist's wages
- Telephone
- Utilities
- Rental of Santa Claus suit (for the annual Christmas party for factory children)
- Supervisory labor salaries
- Insurance on factory building
- Depreciation on factory equipment
- Oil to lubricate filling equipment

Required:

Classify each of the costs as direct materials, direct labor, or overhead by using the following table. The row for "Jars" is filled in as an example.

Costs	Direct Materials	Direct Labor Manufacturing Overhead
Jars	X	

9 PRIME COST AND CONVERSION COST

Refer to the Grin Company manufacturing information in Exercise 13-38.

Required:

1. What was the total prime cost in January?
2. What was the prime cost per unit in January?
3. What was the total conversion cost in January?
4. What was the conversion cost per unit in January?

10 DIRECT MATERIALS USED

Hannah Banana Bakers makes chocolate chip cookies for cafe restaurants. In June, Hannah Banana purchased \$15,500 of materials. On June 1, the materials inventory was \$3,700. On June 30, \$1,600 of materials remained in materials inventory.

Required:

What is the cost of the direct materials that were used in production during June?

11 DIRECT MATERIALS USED, COST OF GOODS MANUFACTURED

In March, Chilton Company purchased materials costing \$14,000 and incurred direct labor cost of \$20,000. Overhead totaled \$36,000 for the month. Information on inventories was as follows:

	March 1	March 31
Materials	\$8,600	\$2,300
Work in process	1,700	9,000
Finished goods	7,000	6,500

Required:

1. What was the cost of direct materials for March?
2. What was the total manufacturing cost in March?
3. What was the cost of goods manufactured for March?

12 COST OF GOODS SOLD

Refer to the Chilton Company information in **Exercise 13-42**.

Required:

What was the cost of goods sold for March?

13 COST OF GOODS SOLD, SALES REVENUE, INCOME STATEMENT

Jasper Company provided the following information for last year:

Sales in units	300,000
Selling price	\$9
Direct materials	\$150,000
Direct labor	\$325,000
Manufacturing overhead	\$215,000
Selling expense	\$437,000
Administrative expense	\$854,000

Last year, beginning and ending inventories of work in process and finished goods equaled zero.

Required:

Calculate the cost of goods sold for last year.

14 INCOME STATEMENT

Refer to the Jasper Company information provided in **Exercise 13-44**.

Required:

1. Calculate the sales revenue for last year.
2. Prepare an income statement for Jasper Company for last year.

15 INCOME STATEMENT

Refer to the Jasper Company information provided in **Exercise 13-44**.

Required:

Prepare an income statement for Jasper Company for last year. Calculate the percentage of sales for each line item on the income statement. Round percentages to the nearest tenth of a percent.

16 ETHICAL BEHAVIOR

Manager: If I can reduce my costs by \$40,000 during this last quarter, my division will show a profit that is 10 percent above the planned level, and I will receive a \$10,000 bonus. However, given the projections for the fourth quarter, it does not look promising. I really need that \$10,000. I know of one way that I can qualify. All I have to do is lay off my three most expensive salespeople. After all, most of the orders are in for the fourth quarter, and I can always hire new sales personnel at the beginning of the next year.

Required:

What is the right choice for the manager to make? Why did the ethical dilemma arise? Is there any way to redesign the accounting reporting system to discourage the type of behavior that the manager is contemplating?

17 ETHICAL ISSUES

The Bedron Company is a closely held investment service group that has been quite successful over the past five years, consistently providing most members of the top management group with 50 percent

bonuses. In addition, both the chief financial officer and the chief executive officer have received 100 percent bonuses. Bedron expects this trend to continue.

Recently, Bedron's top management group, which holds 35 percent of the outstanding shares of common stock, has learned that a major corporation is interested in acquiring Bedron. The other corporation's initial offer is attractive and is several dollars per share higher than Bedron's current share price. One member of management told a group of employees under him about the potential offer. He suggested that they might want to purchase more Bedron stock at the current price in anticipation of the takeover offer.

Required:

Do you think that the employees should take the action suggested by their boss? Suppose the action is prohibited by Bedron's code of ethics. Now suppose that it is not prohibited by Bedron's code of ethics. Is the action acceptable in that case?

18 COMPANY CODES OF CONDUCT

Using the Internet, locate the code of conduct for three different companies.

Required:

Briefly describe each code of conduct. How are they similar? How are they different?

PROBLEMI

1 MANUFACTURING, COST CLASSIFICATION, INCOME STATEMENT SERVICE FIRM PRODUCT COSTS AND SELLING AND ADMINISTRATIVE COSTS, INCOME STATEMENT

Pop's Drive-Thru Burger Heaven produces and sells quarter-pound hamburgers. Each burger is wrapped and put in a «burger bag», which also includes a serving of fries and a soft drink. The price for the burger bag is \$3.50. During December, 10,000 burger bags were sold. The restaurant employs college students part-time to cook and fill orders. There is one supervisor (the owner, John Peterson). Pop's maintains a pool of part-time employees so that the number of employees scheduled can be adjusted to the changes in demand. Demand varies on a weekly as well as a monthly basis.

A janitor is hired to clean the building early each morning. Cleaning supplies are used by the janitor, as well as the staff, to wipe counters, wash cooking equipment, and so on. The building is leased from a local real estate company; it has no seating capacity. All orders are filled on a drive-thru basis.

The supervisor schedules work, opens the building, counts the cash, advertises, and is responsible for hiring and firing. The following costs were incurred during December:

Hamburger meat	\$4,500
Buns, lettuce, pickles, and onions	800
Frozen potato strips	1,250
Wrappers, bags, and condiment packages	600
Other ingredients	660
Part-time employees' wages	7,250
John Peterson's salary	3,000
Utilities	1,500
Rent	1,800
Depreciation, cooking equipment and fixtures	600
Advertising	500
Janitor's wages	520
Janitorial supplies	150
Accounting fees	1,500
Taxes	4,250

Pop's accountant, Elena DeMarco, does the bookkeeping, handles payroll, and files all necessary taxes. She noted that there were no beginning or ending inventories of materials. To simplify accounting for costs, Elena assumed that all part-time employees are production employees and that John Peterson's salary is selling and administrative expense. She further assumed that all rent and depreciation expense on the building and fixtures are part of product cost. Finally, she decided to put all taxes into one category, taxes, and to treat them as administrative expense.

Required:

1. Classify each of the costs for Pop's December operations using the table format given below. Be sure to total the amounts in each column. The row for «Hamburger meat» is filled in as an example.

Cost	Direct Materials Labor	Direct Manufacturing Overhead	Selling and Administrative
Hamburger meat	\$4,500		
Total			

2. Prepare an income statement for the month of December.
3. Elena made some simplifying assumptions. Were those reasonable? Suppose a good case could be made that the portion of the employees' time spent selling the burger bags was really a part of sales. In that case, would it be better to divide their time between production and selling? Should John Peterson's time be divided between marketing and administrative duties? What difference (if any) would that make on the income statement?

Problem 13-52 COST OF DIRECT MATERIALS, COST OF GOODS MANUFACTURED, COST OF GOODS SOLD

Bisby Company manufactures fishing rods. At the beginning of July, the following information was supplied by its accountant:

Raw materials inventory \$40,000
 Work-in-process inventory 21,000
 Finished goods inventory 23,200

During July, the direct labor cost was \$43,500, raw materials' purchases were \$64,000, and the total overhead cost was \$108,750. The inventories at the end of July were:

Raw materials inventory \$19,800
 Work-in-process inventory 32,500
 Finished goods inventory 22,100

Required:

1. What is the cost of the direct materials used in production during July?
2. What is the cost of goods manufactured for July?
3. What is the cost of goods sold for July?

Problem 13-53 PREPARATION OF INCOME STATEMENT: MANUFACTURING FIRM

Laworld Inc. manufactures small camping tents. Last year, 200,000 tents were made and sold for \$60 each. Each tent includes the following costs:

Direct materials \$18
 Direct labor 12
 Manufacturing overhead 16

The only selling expenses were a commission of \$2 per unit sold and advertising totaling \$100,000. Administrative expenses, all fixed, equaled \$300,000. There were no beginning or ending finished goods inventories. There were no beginning or ending work-in-process inventories.

Required:

1. Calculate the product cost for one tent. Calculate the total product cost for last year.
2. Prepare an income statement for external users. Did you need to prepare a supporting statement of cost of goods manufactured? Explain. Suppose 200,000 tents were produced (and 200,000 sold) but that the company had a beginning finished goods inventory of 10,000 tents produced in the prior year at \$40 per unit. The company follows a first-in, first-out policy for its inventory (meaning that the units produced first are sold first for purposes of cost flow). What effect does this have on the income statement? Show the new statement.

Problem 13-54 COST OF GOODS MANUFACTURED, COST OF GOODS
OBJECTIVE 5 SOLD

Hayward Company, a manufacturing firm, has supplied the following information from its accounting records for the month of May:

Direct labor cost	\$10,500
Purchases of raw materials	15,000
Supplies used	675
Factory insurance	350
Commissions paid	2,500
Factory supervision	2,225
Advertising	800
Material handling	3,750
Materials inventory, May 1	3,475
Work-in-process inventory, May 1	12,500
Finished goods inventory, May 1	6,685
Materials inventory, May 31	9,500
Work-in-process inventory, May 31	14,250
Finished goods inventory, May 31	4,250

Required:

1. Prepare a statement of cost of goods manufactured.
2. Prepare a statement of cost of goods sold.

Problem 13-55 COST IDENTIFICATION

Following is a list of cost items described in the chapter as well as a list of brief descriptive settings for each item.

Cost terms:

- a. Opportunity cost
- b. Period cost
- c. Product cost

- d. Direct labor cost
- e. Selling cost
- f. Conversion cost
- g. Prime cost
- h. Direct materials cost
- i. Manufacturing overhead cost
- j. Administrative cost

Settings:

1. Marcus Armstrong, manager of Timmins Optical, estimated that the cost of plastic, wages of the technician producing the lenses, and overhead totaled \$30 per pair of single-vision lenses.
2. Linda was having a hard time deciding whether to return to school. She was concerned about the salary she would have to give up for the next four years.
3. Randy Harris is the finished goods warehouse manager for a medium-sized manufacturing firm. He is paid a salary of \$90,000 per year. As he studied the financial statements prepared by the local certified public accounting firm, he wondered how his salary was treated.
4. Jamie Young is in charge of the legal department at company headquarters. Her salary is \$95,000 per year. She reports to the chief executive officer.
5. All factory costs that are not classified as direct materials or direct labor.
6. The new product required machining, assembly, and painting. The design engineer asked the accounting department to estimate the labor cost of each of the three operations. The engineer supplied the estimated labor hours for each operation.
7. After obtaining the estimate of direct labor cost, the design engineer estimated the cost of the materials that would be used for the new product.
8. The design engineer totaled the costs of materials and direct labor for the new product.
9. The design engineer also estimated the cost of converting the raw materials into its final form.
10. The auditor for a soft drink bottling plant pointed out that the depreciation on the delivery trucks had been incorrectly assigned to product cost (through overhead). Accordingly, the depreciation charge was reallocated on the income statement.

Required:

Match the items with the settings. More than one cost classification may be associated with each setting; however, select the setting that seems to fit the item best. When you are done, each cost term will be used just once.

Problem 13-58 COST IDENTIFICATION AND ANALYSIS, COST ASSIGNMENT, INCOME STATEMENT

Melissa Vassar has decided to open a printing shop. She has secured two contracts. One is a five-year contract to print a popular regional magazine. This contract calls for 5,000 copies each month. The second contract is a three-year agreement to print tourist brochures for the state. The state tourist office requires 10,000 brochures per month.

Melissa has rented a building for \$1,400 per month. Her printing equipment was purchased for \$40,000 and has a life expectancy of 20,000 hours with no salvage value. Depreciation is assigned to a period based on the hours of usage. Melissa has scheduled the delivery of the products so that two production runs are needed. In the first run, the equipment is prepared for the magazine printing. In the

second run, the equipment is reconfigured for brochure printing. It takes twice as long to configure the equipment for the magazine setup as it does for the brochure setup. The total setup costs per month are \$600.

Insurance costs for the building and equipment are \$140 per month. Power to operate the printing equipment is strongly related to machine usage. The printing equipment causes virtually all the power costs. Power costs will run \$350 per month. Printing materials will cost \$0.40 per copy for the magazine and \$0.08 per copy for the brochure. Melissa will hire workers to run the presses as needed (part-time workers are easy to hire). She must pay \$10 per hour. Each worker can produce 20 copies of the magazine per printing hour or 100 copies of the brochure. Distribution costs are \$500 per month. Melissa will receive a salary of \$1,500 per month. She is responsible for personnel, accounting, sales, and production – in effect, she is responsible for administering all aspects of the business.

Required:

1. What are the total monthly manufacturing costs?
2. What are the total monthly prime costs? Total monthly prime costs for the regional magazine? For the brochure?
3. What are the total monthly conversion costs? Suppose Melissa wants to determine monthly conversion costs for each product. Assign monthly conversion costs to each product using direct tracing and driver tracing whenever possible. For those costs that cannot be assigned using a tracing approach, you may assign them using direct labor hours.
4. Melissa receives \$1.80 per copy of the magazine and \$0.45 per brochure. Prepare an income statement for the first month of operations.

Problem 13-59 COST ANALYSIS, INCOME STATEMENT

Five to six times a year, Kicker puts on tent sales in various cities throughout Oklahoma and the surrounding states. The tent sales are designed to show Kicker customers new products, engender enthusiasm about those products, and sell soon to be out-of-date products at greatly reduced prices. Each tent sale lasts one day and requires parking lot space to set up the Kicker semitrailer; a couple of show cars; a deejay playing music; and a tent to sell Kicker merchandise, distribute brochures, and so on. Last year, the Austin tent sale was held in a far corner of the parking lot outside the city exhibition hall where the automotive show was in progress. Because most customers were interested more in the new model cars than in the refurbishment of their current cars, foot traffic was low. In addition, customers did not want to carry speakers and amplifiers all the way back to where they had originally parked. Total direct costs for this tent sale were \$14,300. Direct costs included gasoline and fuel for three pickup trucks and the semitrailer; wages and per diem for the five Kicker personnel who traveled to the show; rent on the parking lot space; depreciation on the semitrailer, pickups, tent, tables (in tent), sound equipment; and the like. Revenue was \$20,000. Cost of goods sold for the speakers was \$7,000.

Required:

1. How do you suppose Kicker accounts for the costs of the tent sales? What income statement items are affected by the tent sales?
2. What was the profit (loss) from the Austin tent sale? What do you think Kicker might do to make it more profitable in the future?

Cases

Case 13-60 COST CLASSIFICATION, INCOME STATEMENT

Gateway Construction Company is a family-operated business that was founded in 1950 by Samuel Gateway. In the beginning, the company consisted of Gateway and three employees laying gas, water, and sewage pipelines as subcontractors. Currently, the company employs 25 to 30 people; Jack Gateway, Samuel's son, directs it. The main line of business continues to be laying pipeline.

Most of Gateway's work comes from contracts with city and state agencies. All of the company's work is located in Nebraska. The company's sales volume averages \$3 million, and profits vary between 0 and 10 percent of sales.

Sales and profits have been somewhat below average for the past three years due to a recession and intense competition. Because of this competition, Jack Gateway is constantly reviewing the prices that other companies bid for jobs; when a bid is lost, he makes every attempt to analyze the reasons for the differences between his bid and that of his competitors. He uses this information to increase the competitiveness of future bids.

Jack has become convinced that Gateway's current accounting system is deficient. Currently, all expenses are simply deducted from revenues to arrive at operating income. No effort is made to distinguish among the costs of laying pipe, obtaining contracts, and administering the company. Yet all bids are based on the costs of laying pipe.

With these thoughts in mind, Jack began a careful review of the income statement for the previous year (see next page). First, he noted that jobs were priced on the basis of equipment hours, with an average price of \$165 per equipment hour. However, when it came to classifying and assigning costs, he decided that he needed some help. One thing that really puzzled him was how to classify his own salary of \$114,000. About half of his time was spent in bidding and securing contracts, and the other half was spent in general administrative matters.

Required:

1. Classify the costs in the income statement as (1) costs of laying pipe (production costs), (2) costs of securing contracts (selling costs), or (3) costs of general administration. For production costs, identify direct materials, direct labor, and overhead costs. The company never has significant work in process (most jobs are started and completed within a day).
2. Assume that a significant driver is equipment hours. Identify the expenses that would likely be traced to jobs using this driver. Explain why you feel these costs are traceable using equipment hours. What is the cost per equipment hour for these traceable costs?

<i>Gateway Construction Income Statement For the Year Ended December 31, 2009</i>		
Sales (18,200 equipment		
hours @ \$165 per hour)		\$3,003,000
Less expenses:		
Utilities	\$ 24,000	
Machine operators	218,000	
Rent, office building	24,000	
CPA fees	20,000	
Other direct labor	265,700	
Administrative salaries	114,000	
Supervisory salaries	70,000	
Pipe	1,401,340	
Tires and fuel	418,600	
Depreciation, equipment	198,000	
Salaries of mechanics	50,000	
Advertising	15,000	
Total expenses		2,818,640
Income before income taxes		\$ 184,360

Case 13-61 COST INFORMATION AND ETHICAL BEHAVIOR, SERVICE ORGANIZATION

Jean Erickson, manager and owner of an advertising company in Charlotte, North Carolina, had arranged a meeting with Leroy Gee, the chief accountant of a large, local competitor. The two are lifelong friends. They grew up together in a small town and attended the same university. Leroy was a competent, successful accountant but currently was experiencing some personal financial difficulties. The problems were created by some investments that had turned sour, leaving him with a \$15,000 personal loan to pay off—just at the time that his oldest son was scheduled to enter college.

Jean, on the other hand, was struggling to establish a successful advertising business. She had recently acquired the rights to open a branch office of a large regional advertising firm headquartered in Atlanta, Georgia. During her first two years, she had managed to build a small, profitable practice; however, the chance to gain a significant foothold in the Charlotte advertising community hinged on the success of winning a bid to represent the state of North Carolina in a major campaign to attract new industry and tourism. The meeting she had scheduled with Leroy concerned the bid she planned to submit.

Jean: Leroy, I'm at a critical point in my business venture. If I can win the bid for the state's advertising dollars, I'll be set. Winning the bid will bring \$600,000 to \$700,000 of revenues into the firm. On top of that, I estimate that the publicity will bring another \$200,000 to \$300,000 of new business.

Leroy: I understand. My boss is anxious to win that business as well. It would mean a huge increase in profits for my firm. It's a competitive business, though. As new as you are, I doubt that you'll have much chance of winning.

Jean: You may be wrong. You're forgetting two very important considerations. First, I have the backing of all the resources and talent of a regional firm. Second, I have some political connections. Last year, I was hired to run the publicity side of the governor's campaign. He was impressed with my work and would like me to have this business. I am confident that the proposals I submit will be very competitive. My only concern is to submit a bid that beats your firm. If I come in with a lower bid and good proposals, the governor can see to it that I get the work.

Leroy: Sounds promising. If you do win, however, there will be a lot of upset people. After all, they are going to claim that the business should have been given to local advertisers, not to some out-of-state firm. Given the size of your office, you'll have to get support from Atlanta. You could take a lot of heat.

Jean: True. But I am the owner of the branch office. That fact alone should blunt most of the criticism. Who can argue that I'm not a local? Listen, with your help, I think I can win this bid. Furthermore, if I do win it, you can reap some direct benefits. With that kind of business, I can afford to hire an accountant, and I'll make it worthwhile for you to transfer jobs. I can offer you an up-front bonus of \$15,000. On top of that, I'll increase your annual salary by 20 percent. That should solve most of your financial difficulties. After all, we have been friends since day one—and what are friends for?

Leroy: Jean, my wife would be ecstatic if I were able to improve our financial position as quickly as this opportunity affords. I certainly hope that you win the bid. What kind of help can I provide?

Jean: Simple. To win, all I have to do is beat the bid of your firm. Before I submit my bid, I would like you to review it. With the financial skills you have, it should be easy for you to spot any excessive costs that I may have included. Or perhaps I included the wrong kind of costs. By cutting excessive costs and eliminating costs that may not be directly related to the project, my bid should be competitive enough to meet or beat your firm's bid.

Required:

1. What would you do if you were Leroy? Fully explain the reasons for your choice. What do you suppose the code of conduct for Leroy's company would say about this situation?
2. What is the likely outcome if Leroy agrees to review the bid? Is there much risk to him personally if he reviews the bid? Should the degree of risk have any bearing on his decision?

SOLUZIONI

1

Slapshot Company Income Statement For the Month of June

Sales revenue (16,000 × \$90)	\$	1,440,000
Cost of goods sold		485,000
Gross margin	\$	955,000
Less:		
Selling expense:		
Commissions (0.15 × \$1,440,000)	\$	216,000
Fixed selling expense		200,000
		416,000
Administrative expense		115,000
Operating income	\$	424,000

2

Slapshot Company Income Statement For the Month of June

		Percent*
Sales revenue (16,000 × \$90)	\$	1,440,000 100.0
Cost of goods sold		485,000 33.7
Gross margin	\$	955,000 66.3
Less:		
Selling expense:		
Commissions (0.15 × \$1,440,000)	\$	216,000
Fixed selling expense		200,000
		416,000 28.9
Administrative expense		115,000 8.0
Operating income	\$	424,000 29.4

*Steps in calculating the percentages (the percentages are rounded):

$$1. \text{ Sales revenue percent} = \frac{\$ 1,440,000}{\$ 1,440,000} = 1.00, \text{ or } 100\%$$

(Sales revenue is always 100% of sales revenue.)

$$2. \text{ Cost of goods sold percent} = \frac{\$ 485,000}{\$ 1,440,000} = 0.337, \text{ or } 33.7\%$$

$$3. \text{ Gross margin percent} = \frac{\$ 955,000}{\$ 1,440,000} = 0.663, \text{ or } 66.3\%$$

$$4. \text{ Selling expense percent} = \frac{\$ 416,000}{\$ 1,440,000} = 0.289, \text{ or } 28.9\%$$

3. (Concluded)

$$5. \text{ Administrative expense percent} = \frac{\$ 115,000}{\$ 1,440,000} = 0.0798, \text{ or } 8.0\%$$

$$6. \text{ Operating income percent} = \frac{\$ 424,000}{\$ 1,440,000} = 0.294, \text{ or } 29.4\%$$

Cornerstone Exercise 13-30

Allstar Exposure Income Statement For the Past Month

Sales revenues		\$ 410,000
Less operating expenses:		
Sales commissions	\$ 50,000	
Technology	75,000	
Research and development	200,000	
Selling expenses	10,000	
Administrative expenses	35,000	370,000
Operating income		\$ 40,000

4

1. The total product is the product and its features (processing speed, disk drives, software packages, and so on), the service, the operating and maintenance requirements, and the delivery speed.
2. One company is emphasizing low costs, and the other is attempting to differentiate its PC by offering faster delivery and higher-quality service.
3. The Confiar's service component and its delivery time appear to be better than Drantex's. Thus, the realization of these features appears to outweigh the additional sacrifice (the additional operating and maintenance cost) associated with the Confiar PC. The implications for managerial accounting are straightforward. The managerial accounting information system should collect and report information about customer realization and sacrifice. Much of this information is external to the firm but clearly needed by management.
4. Better quality and shorter delivery time increase the value of what the customer receives, while lowering the price decreases the amount paid. In total, customer value has increased and presumably this should make the Drantex PC much more competitive. This example illustrates how quality, time, and costs are essential competitive weapons. It also illustrates how critical it is for the managerial accounting system to collect and report data concerning these three dimensions.

5

	Costs	Salaries	Commissions
Derek		\$25,000	\$6,000
Lawanna		<u>30,000</u>	<u>1,500</u>
Total		<u>\$55,000</u>	<u>\$7,500</u>

2. All of Derek's time is spent selling, so all of his salary cost is selling cost. Lawanna spends two-thirds of her time selling, so \$20,000 ($\$30,000 \times 2/3$) of her salary is selling cost. The remainder is administrative cost. All commissions are selling costs.

Cornerstone Exercise 13-32 (Concluded)

	Selling Expenses	Administrative Expenses
Derek's salary	\$25,000	
Lawanna's salary	20,000	\$10,000
Derek's commissions	6,000	
Lawanna's commissions	<u>1,500</u>	
Total	<u>\$52,500</u>	<u>\$10,000</u>

Exercise 13-33

- The two products that Holmes sells are playhouses and the installation of playhouses. The playhouse itself is a product, and the installation is a service.
- Holmes could assign the costs to production and to installation, but if the installation is a minor part of its business, it probably does not go to the trouble.
- The opportunity cost of the installation process is the loss of the playhouses that could have been built by the two workers who were pulled off the production line.

Exercise 13-37

Costs	Direct Materials	Direct Labor	Manufact. Overhead
Jars	X		
Sugar	X		
Fruit	X		
Pectin	X		
Boxes	X		
Depreciation on the factory building			X
Cooking equipment operators' wages		X	
Filling equipment operators' wages		X	
Packers' wages		X	
Janitors' wages			X
Receptionist's wages			X
Telephone			X
Utilities			X
Rental of Santa Claus suit			X
Supervisory labor salaries			X
Insurance on factory building			X
Depreciation on factory equipment			X
Oil to lubricate filling equipment			X

Exercise 13-39

1. Direct materials	\$400,000
Direct labor	80,000
Total prime cost	<u>\$480,000</u>

$$2. \text{ Prime Cost per Unit} = \frac{\text{Total Prime Cost}}{\text{Number of Units}}$$

$$= \frac{\$480,000}{6,400} = \$75$$

3. Direct labor	\$80,000
Manufacturing overhead	320,000
Total conversion cost	<u>\$400,000</u>

$$\begin{aligned}
 4. \text{ Conversion Cost per Unit} &= \frac{\text{Total Conversion Cost}}{\text{Number of Units}} \\
 &= \frac{\$ 400,000}{6,400} = \$62.50
 \end{aligned}$$

Exercise 13-40

1. Materials inventory, June 1	\$ 3,700
Materials purchases in June	15,500
Materials inventory, June 30	<u>(1,600)</u>
Direct materials used in June	<u><u>\$ 17,600</u></u>

Exercise 13-42

1. Materials inventory, March 1	\$8,600
Materials purchases in March	14,000
Materials inventory, March 31	<u>(2,300)</u>
Direct materials used in March	<u><u>\$20,300</u></u>
2. Direct materials	\$20,300
Direct labor	20,000
Manufacturing overhead	<u>36,000</u>
Total manufacturing cost	<u><u>\$76,300</u></u>
3. Total manufacturing cost	\$76,300
Add: Work in process, March 1	1,700
Less: Work in process, March 31	<u>(9,000)</u>
Cost of goods manufactured	<u><u>\$69,000</u></u>

Exercise 13-43

1. Materials inventory, March 1	\$8,600
Materials purchases in March	14,000
Materials inventory, March 31	<u>(2,300)</u>
Direct materials used in March	<u><u>\$20,300</u></u>
2. Direct materials	\$20,300
Direct labor	20,000
Manufacturing overhead	<u>36,000</u>
Total manufacturing cost	<u><u>\$76,300</u></u>
3. Total manufacturing cost	\$76,300
Add: Work in process, March 1	1,700
Less: Work in process, March 31	<u>(9,000)</u>
Cost of goods manufactured	<u><u>\$69,000</u></u>

4. Cost of goods manufactured	\$69,000
Add: Finished goods, March 1	7,000
Less: Finished goods, March 31	<u>(6,500)</u>
Cost of goods sold	<u>\$69,500</u>

Exercise 13-44

1. Direct materials	\$150,000
Direct labor	325,000
Manufacturing overhead	<u>215,000</u>
Cost of goods sold	<u>\$690,000</u>

Note: Because there were no beginning nor ending work in process or finished goods inventories, no adjustments were made for them in this statement.

Exercise 13-45

1. Sales Revenue = Number of Units Sold × Selling Price
= 300,000 × \$9
= \$2,700,000

Exercise 13-45 (Concluded)**2.**

**Jasper Company
Income Statement
For the Past Year**

Sales revenue	\$ 2,700,000
Cost of goods sold	<u>690,000*</u>
Gross profit.....	\$ 2,010,000
Less:	
Selling expense	437,000
Administrative expense	<u>854,000</u>
Operating income	<u>\$ 719,000</u>
*Direct materials	\$ 150,000
Direct labor.....	325,000
Manufacturing overhead.....	<u>215,000</u>
Cost of goods sold	<u>\$ 690,000</u>

Exercise 13-46

**Jasper Company
Income Statement
For the Past Year**

	<i>Sales & Expenses</i>	<i>Percent of Sales*</i>
Sales revenue	\$2,700,000	100.0
Cost of goods sold	<u>690,000</u>	<u>25.6</u>
Gross profit.....	<u>\$2,010,000</u>	<u>74.4</u>
Less:		
Selling expense.....	437,000	16.2
Administrative expense.....	<u>854,000</u>	<u>31.6</u>
Operating income	<u>\$719,000</u>	<u>26.6</u>

*See solution to Exercise 13-45.

$$\text{Sales revenue: } \frac{\$ 2,700,000}{2,700,000} = 1.00, \text{ or } 100\%$$

$$\text{Cost of goods sold: } \frac{\$ 690,000}{2,700,000} = 0.256, \text{ or } 25.6\%$$

$$\text{Gross profit: } \frac{\$ 2,010,000}{2,700,000} = 0.744, \text{ or } 74.4\%$$

$$\text{Selling expense: } \frac{\$ 437,000}{2,700,000} = 0.162, \text{ or } 16.2\%$$

$$\text{Administrative expense: } \frac{\$ 854,000}{2,700,000} = 0.316, \text{ or } 31.6\%$$

$$\text{Operating income: } \frac{\$ 719,000}{2,700,000} = 0.266, \text{ or } 26.6\%$$

Exercise 13-47

A manager has a responsibility to the company as well as society. If he or she lays off the employees, he or she ignores both of these responsibilities. In effect, the manager would be pursuing his or her self-interest at the expense of the company and the salespeople. While pursuit of self-interest is not necessarily unethical, it can be if it harms others. In this case, the manager's action could result in lower profits for the company because sales may decrease and unnecessary training costs will be incurred when the positions are refilled the following year. Similarly, it is unjust to penalize productive employees simply to earn a bonus. The right choice is to retain the three salespeople. In ethical terms, the manager is not behaving with integrity.

The reward system, in part, encouraged this behavior. Apparently, the manager is paid a bonus if profits exceed 10 percent of planned profits. By basing reward on a short-run measure such as profits, the

manager has the incentive to manipulate earnings in the short run. One way of manipulating annual earnings is to reduce discretionary expenditures.

This type of behavior can be discouraged by expanding the performance measures to include long-run factors like market share, productivity, and personnel development. The accounting system can also be used to track trends (e.g., training costs over time). Moreover, managers can be required to provide extensive justification for significant changes in discretionary expenses.

Exercise 13-48

The employees should not follow the suggestion of their boss to purchase more shares in anticipation of a buyout. This is insider trading and is illegal. Insider trading is prohibited by many corporate codes of ethics. Even when it is not explicitly prohibited by the corporate code of ethics, it is still wrong and illegal.

Exercise 13-49

Answers will vary.

PROBLEMS

Problem 13-50

1.

Cost	Direct Materials	Direct Labor	Manufact. Overhead	Selling and Administrative
Hamburger meat	\$4,500			
Buns, lettuce, pickles, and onions	800			
Frozen potato strips	1,250			
Wrappers, bags, and condiment packages	600			
Other ingredients	660			
Part-time employees' wages		\$7,250		
John Peterson's salary				\$3,000
Utilities			\$1,500	
Rent			1,800	
Depreciation, cooking equipment and fixtures			600	
Advertising				500
Janitor's wages			520	
Janitorial supplies			150	
Accounting fees				1,500
Taxes				4,250
Totals	\$7,810	\$7,250	\$4,570	\$9,250

Explanation of Classification

Direct materials include all the food items that go into a burger bag, as well as the condiment packages and the wrappers and bags themselves. These materials go "out the door" in the final product. "Other ingredients" might include the oil to fry the potato strips and grease the frying surface for the hamburgers and the salt for the fries. They are direct materials but could also be classified as overhead because of cost and convenience.

Direct labor consists of the part-time employees who cook food and fill orders.

Overhead consists of all indirect costs associated with the production process. These are utilities, the rent for the building, the depreciation on the equipment and register, and the cost of janitorial fees and supplies.

Selling and administrative expense includes John Peterson's salary, advertising, accounting fees, and taxes.

Problem 13-50 (Concluded)

**Pop's Drive-Thru Burger Heaven
Income Statement
For the Month of December**

2. Sales (\$3.50 × 10,000).....		\$	35,000
Less cost of goods sold:			
Direct materials	\$	7,810	
Direct labor		7,250	
Manufacturing overhead		4,570	19,630
Gross margin		\$15,370	
Less: Selling and administrative expense			9,250
Net income			\$ 6,120

3. Elena's simplifying assumptions were: (1) all part-time employees are production workers, (2) John Peterson's salary is for selling and administrative functions, (3) all building-related expense as well as depreciation on cooking equipment and fixtures are for production, and (4) all taxes are administrative expense. These make it easy to classify 100% of each expense as product cost or selling and administrative cost. The result is that she does not have to perform studies of the time spent by each employee on producing versus selling burger bags. In addition, it is likely that John Peterson pitches in to help fry burgers or assemble burger bags when things get hectic. Of course, during those times, he is engaged in production—not selling or administration. The cost of determining just exactly how many minutes of each employee's day is spent in production versus selling is probably not worth it. (Remember, accountants charge by the number of hours spent—the more time Elena spends separating costs into categories, the higher her fees.)
- For this small business, there is little problem with misclassifying these expenses. Pop's Drive-Thru Burger Heaven is not a publicly traded company, and its income statements do not have to conform to GAAP. Outside use of the statements is confined to government taxing authorities and a bank (if a loan or line of credit is necessary). Elena's accounting works well for those purposes.

Problem 13352

1. Direct materials = \$40,000 + \$64,000 – \$19,800 = \$84,200
- 2.
- | | | | |
|--|--|------------------|--|
| Direct materials used | | \$84,200 | |
| Direct labor | | 43,500 | |
| Manufacturing overhead | | 108,750 | |
| Total manufacturing cost for July | | \$236,450 | |
| Work in process, July 1 | | 21,000 | |
| Work in process, July 31 | | (32,500) | |
| Cost of goods manufactured | | \$224,950 | |
- 3.
- | | | | |
|----------------------------------|--|------------------|--|
| Cost of goods manufactured | | \$224,950 | |
| Finished goods inventory, July 1 | | 23,200 | |
| Finished good inventory, July 31 | | (22,100) | |
| Cost of goods sold | | \$226,050 | |

Problem 13-53

1. Direct materials	\$18
Direct labor	12
Manufacturing overhead	<u>16</u>
Unit product cost	<u>\$46</u>

Total product cost = $\$46 \times 200,000 = \$9,200,000$

Problem 13-53 (Concluded)**2.**

**Laworld Inc.
Income Statement
For Last Year**

Sales ($\$60 \times 200,000$)	\$ 12,000,000
Cost of goods sold	<u>9,200,000</u>
Gross margin	\$ 2,800,000
Less:	
Commissions ($\$2 \times 200,000$).....	400,000
Fixed selling expense	100,000
Administrative expense.....	<u>300,000</u>
Operating income	<u>\$ 2,000,000</u>

No, we do not need to prepare a statement of cost of goods manufactured because there were no beginning or ending inventories of work in process. As a result, total manufacturing cost is equal to the cost of goods manufactured.

3. The 10,000 tents in beginning finished goods inventory have a cost of \$40, and that is lower than the year's unit product cost of \$46. The FIFO assumption says that beginning inventory is sold before current year production. Therefore, the cost of goods sold will be lower than it would be if there were no beginning inventory. This can be seen in the following statement of cost of goods sold.

Cost of goods manufactured ($\$46 \times 200,000$)	\$ 9,200,000
Add: Beginning inventory finished goods ($\$40 \times 10,000$).....	400,000
Less: Ending inventory finished goods ($\$46 \times 10,000$)	<u>(460,000)</u>
Cost of goods sold	<u>\$ 9,140,000</u>

**Laworld Inc.
Revised Income Statement
For Last Year**

Sales ($\$60 \times 200,000$)	\$ 12,000,000
Cost of goods sold	<u>9,140,000</u>
Gross margin	\$ 2,860,000
Less:	
Commissions ($\$2 \times 200,000$).....	400,000

Fixed selling expense	100,000
Administrative expense.....	300,000
Operating income	<u>\$ 2,060,000</u>

Problem 13-54

1. Direct materials = \$3,475 + \$15,000 – \$9,500 = \$8,975

Hayward Company Statement of Cost of Goods Manufactured For the Month of May

Direct materials used		\$ 8,975
Direct labor.....		10,500
Manufacturing overhead:		
Factory supplies	\$ 675	
Factory insurance	350	
Factory supervision.....	2,225	
Material handling.....	<u>3,750</u>	<u>7,000</u>
Total manufacturing cost for May		\$ 26,475
Work in process, May 1.....		12,500
Work in process, May 31.....		<u>(14,250)</u>
Cost of goods manufactured		<u>\$ 24,725</u>

2.

Hayward Company Statement of Cost of Goods Sold For the Month of May

Cost of goods manufactured	\$ 24,725
Finished goods inventory, May 1	6,685
Finished goods inventory, May 31	<u>(4,250)</u>
Cost of goods sold	<u>\$ 27,160</u>

Problem 13-55

1. c. These costs include direct materials, direct labor, and overhead. The total of these three types of costs equals product cost.
2. a. If Linda returns to school, she will need to quit her job. The lost salary is the opportunity cost of returning to school.
3. b. If Randy were engaged in manufacturing a product, his salary would be a product cost. Instead, the product has been manufactured. It is in the finished goods warehouse waiting to be sold. This is a period cost.
4. j. Jamie is working at company headquarters, and her salary is part of administrative cost.

5. i. All factory costs other than direct materials and direct labor are, by definition, manufacturing overhead.

Problem 13-55 (Concluded)

6. d. The design engineer is estimating the total number of labor hours required to complete the manufacturing of a product. This total will be used to compute direct labor cost.
7. h. This is direct materials cost.
8. g. The sum of direct materials and direct labor is, by definition, prime cost.
9. f. The cost of converting direct materials into finished product is the sum of direct labor and overhead. This is conversion cost.
10. e. The depreciation on the delivery trucks is part of selling cost, the cost of selling and delivering product.

Problem 13-58

1. Direct materials:			
Magazine (5,000 × \$0.40)	\$2,000		
Brochure (10,000 × \$0.08)	<u>800</u>		\$2,800
Direct labor:			
Magazine ($\frac{5,000}{20} \times \10)	\$2,500		
Brochures ($\frac{10,000}{100} \times \10)	<u>1,000</u>		3,500
Manufacturing overhead:			
Rent	\$1,400		
Depreciation ($\frac{40,000}{20,000} \times 350^*$)	700		
Setups	600		
Insurance	140		
Power	<u>350</u>		3,190
Cost of goods manufactured			<u>\$9,490</u>

*Production is 20 units per printing hour for magazines and 100 units per printing hour for brochures, yielding monthly machine hours of 350 $[(5,000/20) + (10,000/100)]$. This is also monthly labor hours as machine labor only operates the presses.

2. Direct materials	\$2,800
Direct labor	<u>3,500</u>
Total prime costs	<u>\$6,300</u>
Magazine:	
Direct materials	\$2,000
Direct labor	<u>2,500</u>
Total prime costs	<u>\$4,500</u>

Brochure:		
Direct materials		\$800
Direct labor		<u>1,000</u>
Total prime costs		<u>\$1,800</u>

Problem 13-58 (Continued)

3. Total monthly conversion cost:

Direct labor	\$3,500	
Manufacturing overhead	<u>3,190</u>	
Total	<u>\$6,690</u>	
Magazine:		
Direct labor	\$2,500	
Manufacturing overhead:		
Power (\$1 × 250).....	\$250	
Depreciation (\$2 × 250).....	500	
Setups (2/3 × \$600)	400	
Rent and insurance (\$4.40 × 250 DLH)*	<u>1,100</u>	<u>2,250</u>
Total	<u>\$4,750</u>
Brochures:		
Direct labor \$1,000
Manufacturing overhead:		
Power (\$1 × 100).....	\$100	
Depreciation (\$2 × 100).....	200	
Setups (1/3 × \$600)	200	
Rent and insurance (\$4.40 × 100 DLH)*	<u>440</u>	<u>940</u>
Total	<u>\$1,940</u>

* Rent and insurance cannot be traced to each product so the costs are assigned using direct labor hours: $\$1,540/350 \text{ DLH} = \4.40 per direct labor hour. The other overhead costs are traced according to their usage. Depreciation and power are assigned by using machine hours (250 for magazines and 100 for brochures): $\$350/350 = \1.00 per machine hour for power and $\$40,000/20,000 = \2.00 per machine hour for depreciation. Setups are assigned according to the time required. Since magazines use twice as much time, they receive twice the cost: Letting X = the proportion of setup time used for brochures, $2X + X = 1$ implies a cost assignment ratio of $2/3$ for magazines and $1/3$ for brochures.

Problem 13-58 (Concluded)

4. Sales [(5,000 × \$1.80) + (10,000 × \$0.45)].....		\$13,500
Less cost of goods sold		<u>9,490</u>
Gross margin		\$4,010
Less operating expenses:		
Selling	\$500a	
Administrative.....	<u>1,500b</u>	<u>2,000</u>
Income before taxes		<u>\$2,010</u>

a Distribution of goods is a selling expense.

b A case could be made for assigning part of her salary to production. However, since she is responsible for coordinating and managing all business functions, an administrative classification is more convincing.

Problem 13-59

1. The costs of the tent sales are accounted for as selling expense. The tent sales are designed to sell outdated or remanufactured products. They are not the main reason that Kicker is in business. In fact, an important objective is simply to increase awareness of the Kicker brand. As a result, these related costs are selling expense.

2. Revenue	\$20,000
Cost of goods sold	(7,000)
Tent sale expense	<u>(14,300)</u>
Tent sale loss	<u>(1,300)</u>

A couple of actions could be taken. First, it could look for a more appropriate venue. The outer parking lot of a shopping center, or even a large grocery store, would enable Kicker employees to easily load purchased product into customer cars. Second, the deejay could be dispensed with; instead, music could be played from CDs over the audio system in the truck. Third, Kicker could spend a year or so raising brand awareness in the Austin market before attempting another tent sale.

employees to avoid conflicts of interest and to refuse any gift, favor, or hospitality that would influence employee actions inappropriately.

2. If Leroy agrees to review the bid, he will likely use his knowledge of his current employer's position to help Jean win the bid. In fact, agreement to help probably would reflect a desire for the bonus and new job with the associated salary increase. Helping would likely ensure that Jean would win the bid. Leroy was concerned about the political fallout and subsequent investigation revealing his involvement—especially if he sent up a red flag by switching to his friend's firm. An investigation may reveal the up-front bonus and increase the suspicion about Leroy's involvement. There is a real possibility that Leroy could be implicated. Whether this would lead to any legal difficulties is another issue. At the very least, some tarnishing of his professional reputation and personal character is possible. Some risk to Leroy exists. The amount of risk, though, should not be a factor in Leroy's decision. What is right should be the central issue, not the likelihood of getting caught.