Module 1: Basic concepts of management accounting

Required reading

- Chapter 1, pages 2-22
- *Ethics Resource Handbook (ERH, available under Resources), Unit C3: “CGA-Canada’s ethics standards”*
  Unit B5: “Corporate governance”
- Chapter 2, pages 30-47
- Reading 1-1: “Moral Responsibility within the Corporation”

Note on the textbook reading: On page 38 under Cost of Goods Sold for a Manufacturing Company, two subsequent headers should be Manufacturing Company, not Merchandising Company.

Overview

Welcome to MA1. This module serves as a foundation for the course, providing an overview of management accounting and how it relates to financial accounting. Module 1 looks at the practice and terminology of management accounting, describes the effects of today’s changing business environment, and introduces the importance of ethical standards. It presents an overview of the basic concepts of identifying and classifying costs, including cost behaviour. Finally, the module looks at manufacturing and non-manufacturing costs.

Assignment reminder

Assignment 1 (see Module 5) is due at the end of week 5 (see Course Schedule). It is a good idea to take a look at it now in order to familiarize yourself with the requirements in advance as you work through Modules 1-4.

Topic outline and learning objectives

1.1 The manager’s need for information  
Describe the role of management accountants in an organization. (Level 2)

1.2 Comparing financial and managerial accounting  
Identify the major differences and similarities between financial and managerial accounting. (Level 2)

1.3 Organizational structure  
Identify job descriptions as either line or staff positions. (Level 2)

1.4 Process management  
Explain the basic concepts underlying lean production: Six Sigma, e-commerce, enterprise systems, and enterprise risk management. (Level 2)

1.5 Ethical standards  
Explain the importance of upholding ethical standards. (Level 2)

1.6 General cost classifications  
Identify the three basic cost elements involved in the manufacture of a product, and give an example of each. (Level 2)

1.7 Cost classifications on financial statements  
Prepare and explain the cost classifications on a manufacturing income statement. (Level 2)

1.8 Costs for planning, costing, and decision making  
Compare and contrast types of costs: product and period, variable and fixed, direct and indirect, differential, opportunity, and sunk; and give an
example of each. (Level 1)
1.1 The manager's need for information

**Learning objective**

- Describe the role of management accountants in an organization. (Level 2)

**LEVEL 2**

In FAI, you studied basic accounting procedures and the three main financial statements — the balance sheet, income statement, and cash-flow statement. These statements are prepared for and provided to users external to the organization such as shareholders, bankers, and government. Accounting focused on the external user is known as financial accounting. In this course, you study accounting information typically provided to users internal to the organization, such as managers. Management accounting serves the needs of users within the organization.

To achieve organizational objectives, the management team is responsible for planning, directing, motivating, and controlling the activities of the business. In this course, you study how accounting information can and should be used by management to carry out its mandate on a more efficient and effective basis.

In many organizations, most of the accounting is performed to generate the financial statements required by external users. As an entity develops and grows, managers need information to help them manage the organization. Sometimes, this information can be obtained from the financial accounting system. In some organizations, completely new systems are designed to meet the needs of the managers.
1.2 Comparing financial and managerial accounting

Learning objective

- Identify the major differences and similarities between financial and managerial accounting. (Level 2)

LEVEL 2

The financial accounting system captures the results of past transactions in financial terms, that is, as measured in dollars. The management accounting system goes beyond this. It often includes plans for the future such as operating budgets and long-term strategic plans. These plans are built into the accounting system to help managers monitor operations.

The management accounting system also includes non-financial information such as percentage defects in operations, percentage on-time delivery, and results of customer surveys. See Exhibit 1-3 for a detailed comparison of financial and management accounting.
1.3 Organizational structure

Learning objective

- Identify job descriptions as either line or staff positions. (Level 2)

LEVEL 2

Some form of decentralization can be found in all but the smallest organizations. Companies decentralize for various reasons, including the need to speed up decisions, to provide more decision capacity than one person can provide, and to train replacements for executive positions in head office. At the same time, other companies retain control at headquarters and are reluctant to delegate responsibility and the related authority to branches or divisions.

An organization chart shows how responsibility, or chain of command, is divided within an entity. Exhibit 1-4 shows an example of an organization chart. Note that informal relationships are common, and when management control and internal control are evaluated they should be considered along with formal relationships. Also note the difference between line and staff positions.

The relationship that exists between accountants and the accounting personnel in the accounting department is a line relationship. However, the work done by accountants for and with personnel from other departments is said to be a staff relationship. Conflicts can arise between staff and line positions in terms of competing for available resources, delegating responsibilities, and executing tasks.
1.4 Process management

**Learning objective**

- Explain the basic concepts underlying lean production: Six Sigma, e-commerce, enterprise systems, and enterprise risk management. (Level 2)

**LEVEL 2**

The business environment has changed tremendously over the past two decades, and the rapid pace of change and trend towards globalization will continue or accelerate over the next decade. Organizations that can keep pace with the ever-changing needs of the consumer and the competition in the global marketplace will survive and succeed.

To succeed in this competitive environment, companies use the following major programs or approaches (among others):

- Improve the quality of the products or services offered.
- Reduce the costs of providing these products or services.

*Business process management* is a strategic move that focuses these approaches on internal operations. The organization chart on page 11 of the textbook illustrates organizational functions (sometimes called departments). Organizations have traditionally focused on functions rather than processes. Focusing improvement efforts on individual functions may help them to operate more efficiently on their own but that approach fails to take into consideration the collective purpose of the functions, which is to provide value to the customer through the value chain. Today’s organizations focus on processes, which naturally operate across functions. Providing a shipment of product to a customer is an example of a business process that spans the sales, manufacturing and distribution functions, and it is therefore important that these departments work together to deliver value to the customer.

**Lean production**

The concept of adding value to the customer is also the focus of lean production in a manufacturing environment. Here all production costs that do not add value to the customer are targeted for elimination. The remaining processes are then designed in such a way that the process follows the logical physical flow of production in order to efficiently produce the final product. This usually results in the creation of *manufacturing cells*, which are self-contained work areas that include all of the resources to complete the product or a portion of the product. The result is the reduction of travel and waiting time of goods in the production process. The ability of production personnel to perform any of the steps in their manufacturing cell increases the flexibility of this approach while improving employee satisfaction. The lean production approach to manufacturing also helps reduce the amount of work-in-process inventory on hand because the work flows continuously through the process. This eliminates the waiting time and resulting accumulation of inventory that normally occur in a traditional manufacturing system. (Work-in-process inventory is discussed in Topic 1.7.)

Manufacturing firms must determine how much inventory to have on hand to satisfy demand, yet they also need to reduce the costs of having to hold the inventory. The cost of holding inventory includes, among others, the purchase price for raw materials and the cost of storage, security, insurance, spoilage, obsolescence, and personnel to handle raw materials, work in process, and finished goods inventories. In lean production, the product is manufactured only when needed by the customer, which reduces the amount of inventory required throughout the manufacturing process. This is called a *pull system* because the customer demand initiates the need for manufacturing and the product is completed as required by the customer. The term *just-in-time* or *JIT* is often used to describe this facet of lean production.

The practice of lean production can help a company save money, but it can have disadvantages as well. Companies depend on raw materials arriving exactly when needed, and materials received must therefore be
defect free. For example, a company does not normally carry enough raw materials to be able to continue work if employees at a supplier’s company stage a strike. Finally, lean production requires close communication with suppliers and major customers.

**Other tools for process management**

The textbook also discusses these methods for managing and improving processes:

- *Six Sigma* focuses on meeting customer specifications by attempting to reduce defects.

- Computer technology tools can be used to automate processes:
  - *E-commerce* is the integration of business processes with the internet. It helps to break down barriers between customers and suppliers, and automates the supply chain.
  
  - *Enterprise systems* are complex integrated software applications that focus on integrating the organization’s internal processes. Enterprise risk management is a process that seeks to foresee potential risks and proactively manage them.
1.5 Ethical standards

Learning objective

- Explain the importance of upholding ethical standards. (Level 2)

**Note:** For all ethics-related readings in this course, it is assumed that you are already familiar with Section A of the *Ethics Readings Handbook* (available under Resources).

**LEVEL 2**

The *ERH* reading, the *CGA-Canada Code of Ethical Principles and Rules of Conduct*, is your Association’s set of standards on this important issue. All CGA students and CGAs are expected to comply with these standards.

Here are the ethical implications of the first three topics:

- **Topic 1.1** elaborates the **manager's need for information**. This has important ethical implications for the management accountant in terms of the provision of useful and accurate information for management. Diligence, candor, and good judgment in the search for and provision of information are essential character traits for the management accountant.

- **Topic 1.2** is concerned with **organizational structure**, particularly decentralization in contemporary business and in the public sector. Important ethical elements for the management accountant working in a decentralized environment might occur in the area of information coordination. The management accountant must show initiative and take responsibility. In terms of taking responsibility, it is extremely important to understand that in situations where corporate superiors request and/or permit management accountants to engage in unethical behaviour, the accountant will be held legally liable for any transgressions; in short, “following orders” is not justification for unethical behaviour.

- **Topic 1.3** discusses **process management**. This has significant ethical implications in terms of the pressures created on organizations when either consumers or providers of products and services use a lean thinking model. The obvious need for high efficiency and reliability can result in cutting ethical corners in a variety of ways. For example, there might be pressure on suppliers to ignore health and safety considerations in order to get the work out on time. The topic also opened the door for discussions related to the possible conflicts between staff and line positions.

The reading, “Ethics and Governance,” from Section B5 in the ERH provides an overview of **corporate governance**. The textbook defines corporate governance as “a system by which a company is directed and controlled.” This topic has received increased recognition since the Enron scandal in 2001. The ERH reading provides an overview of good governance and governance activities, including responsibilities of corporations to principal stakeholders such as shareholders, consumers, the general public, and suppliers.

**Note:** To give you practice at applying your judgment to specific situations, ethics questions have been selected as review and assignment questions throughout this course.

**Chapter summary**

This topic marks the end of the textbook coverage of the introduction to managerial accounting and the business environment. To ensure you understand this material and the corresponding terminology, read the summary on page 22.
1.6 General cost classifications

Learning objective

- Identify the three basic cost elements involved in the manufacture of a product, and give an example of each. (Level 2)

LEVEL 2

The term cost has wide and different applications. The initial treatment of costs is centred on the function of product or service costing for financial accounting purposes.

Manufactured products contain three basic elements:

- Direct materials
- Direct labour
- Manufacturing overhead

\[ CC = DL + MOH \]

\[ PC = DL + DM \]

**Conversion costs** (CC) are direct labour (DL) and manufacturing overhead (MOH). **Prime costs** (PC) are direct labour and direct material (DM). Conversion costs plus prime costs do not equal total costs since direct labour is included in both.

Costs that cannot be easily traced to individual products are treated as manufacturing overhead. Examples of overhead are oil for machines, salary for a supervisor, and depreciation of equipment and buildings. In the case of oil, the cost to trace and the benefit of doing so make it impractical to consider it a direct cost. Depreciation for the period on the factory building cannot be traced to individual products or services in any logical way, so it is considered overhead.

Consider idle time and overtime in terms of whether these two costs should be treated as part of direct labour or overhead. For example, should the overtime premium (the extra wage rate over and above the regular wage rate) be charged to the job in progress, or to all jobs? If the overtime were spent to finish a specific job, then the overtime premium could legitimately be a cost of that job. But overtime on one job is usually the result of scheduling of all jobs, and therefore should be an overhead charge. The same applies to idle time.

The textbook refers to **nonmanufacturing costs**, which include selling costs and general and administrative costs. Service organizations such as banks are now using cost concepts to analyze their costs for the purpose of more accurately pricing consumer products and services offered to banking customers. (The topic of costing of services is covered in Module 5.)

In classifying cost items, it often helps to think about what is assigned to inventory for financial accounting purposes. Selling and administrative expenses have nothing to do with the manufacture of a product. These costs are therefore not treated as product costs but as period costs. Period costs are charged directly to expenses as they are incurred.

Study Exhibit 2-1 to reinforce your knowledge of cost terms.
1.7 Cost classifications on financial statements

Learning objective

- Prepare and explain the cost classifications on a manufacturing income statement. (Level 2)

LEVEL 2

Refer to Exhibit 2-2 and note the similarities and differences between the financial statement presentation of inventory in a merchandising situation and the financial statement presentation of the three types of inventory (raw material, work in process, and finished goods) in a manufacturing setting.

The Cost of goods manufactured of $850,000 on the manufacturing income statement is detailed in Exhibit 2-4. Review the format and headings for this schedule.
1.8 Costs for planning, costing, and decision making

Learning objective

- Compare and contrast types of costs: product and period, variable and fixed, direct and indirect, differential, opportunity, and sunk; and give an example of each. (Level 1)

LEVEL 1

This topic deals with three major classes of costs:

- **Variable and fixed costs** are classifications of costs based on how the cost behaves as volume changes. Cost behaviour is important knowledge for planning and forecasting. Note the definitions and the distinction between unit cost and total cost. (Module 4 deals with cost behavior and decision-making.)

- **Direct and indirect costs** are classifications based on how easily the costs can be traced to a cost object. *Direct* costs such as direct materials and direct labour are easily traced to a cost object such as an individual product or department. *Indirect* costs such as the janitor's salary or utilities expense are less cost-effective to trace, so are included in overhead. Given unlimited resources, any cost can be traced. Business resources are limited, so the cost-benefit must always be considered. (You encounter this concept again in Module 6 on segment analysis.)

- **Differential, opportunity, and sunk costs** are terms used in problem solving and decision analysis. Many people have difficulty understanding these concepts at first, so study them carefully. (Module 9 discusses these types of costs in more detail, and explains how they affect planning and decision-making.)

Activity 1.8-1 Differentiating costs

Work through this activity to reinforce your understanding of cost types.

Chapter summary

This topic marks the end of the textbook coverage of the introduction to managerial accounting and the changing business environment. To ensure you understand this material and the corresponding terminology, read the summary on page 48, work through the review problems on pages 48-51.
Module 1 summary

Module 1 defines various issues related to management accounting.

Topic 1.1 discusses what managers do, and describes the information they need from management accountants.

Topic 1.2 contrasts management accounting and financial accounting with respect to a few major points.

Topic 1.3 introduces different relationships (formal and informal) and lines of responsibility within an organization.

Topic 1.4 deals with tools that can be used to effectively manage business processes in an evolving business environment.

Topic 1.5 emphasizes the pitfalls in the absence of ethical standards in advanced economies and outlines the responsibility of accountants in observing professional ethical behaviour particularly in upholding the CGA-Canada ethical standards.

Topic 1.6 introduces the cost components of a product in terms of manufacturing and nonmanufacturing costs.

Topic 1.7 provides a refresher on where costs are located in financial statements of merchandizing concerns and manufacturing settings.

Topic 1.8 introduces the different types of cost with respect to their behaviour, traceability, and their use for planning and decision-making.
Module 1 self-test

Question 1

Multiple choice

a. In the preparation of the schedule of cost of goods manufactured, the accountant incorrectly excluded as part of manufacturing overhead the janitorial expense on the firm’s factory. What impact will this error have on the financial statements?

1. It will overstate period expenses on the income statement.
2. It will overstate the cost of goods sold on the income statement.
3. It will understate the cost of goods manufactured.
4. It will have no effect on the cost of goods manufactured.

b. Which of the following does not directly focus on process improvement?

1. Lean production
2. Enterprise risk management
3. Six Sigma
4. Enterprise systems

c. Which of the following is true about managerial accounting?

1. Managerial accounting information is prepared for external users.
2. Managerial accounting information is a legal requirement.
3. The structure of managerial accounting practice is relatively flexible.
4. There are structured standards of acceptability for managerial accounting.

d. Which cost changes in total in proportion to changes in volume?

1. Controllable cost
2. Variable cost
3. Fixed cost
4. Sunk cost

e. Which of the following costs is not included in (debited to) inventory?

1. Property taxes on the factory
2. Glue used in the construction of furniture
3. Utility costs related to the retail space
4. Transportation costs regarding materials purchased FOB shipping point

f. Which of the following costs is irrelevant to decision making?

1. Sunk cost
2. Opportunity cost
3. Indirect cost
4. CEO’s salary

g. Which of the following are involved in defining cost behaviour?

1. Product and period costs
2. Opportunity and sunk costs
3. Direct and indirect costs
4. Fixed and variable costs

h. What are the three basic manufacturing costs elements?

1. Direct materials, work in process, and manufacturing overhead
2. Direct materials, direct labour, and finished goods inventory
3. Direct materials, indirect labour, and manufacturing overhead
4. Direct materials, manufacturing overhead, and direct labour

i. Which of the following is a product cost?

1. Direct materials handling
2. Advertising costs
3. Depreciation on store equipment
4. Property taxes on the retail space

j. Unfinished products are considered to be

1. Direct-materials inventory
2. Work-in-process inventory
3. Finished-goods inventory
4. Raw-materials inventory

k. Just-in-time (JIT) production is useful to control which of the following?

1. Operating costs
2. Inventory costs
3. All manufacturing costs
4. Direct-labour costs

l. Which of the following concepts is aimed at developing processes that generate no more than 3.4 defects per million opportunities?

1. Lean production
2. Enterprise risk management
3. Six sigma
4. Enterprise systems

Solution

Question 2

Multiple choice

a. A manufacturer had beginning finished goods of $25,000, a cost of goods manufactured of $70,000, a gross margin of $80,000, and sales of $150,000. What is the value of the ending finished goods inventory?

1. $20,000
2. $25,000
3. $70,000
4. $170,000

Answer items b), c), and d) using the following information.

The following selected data for April are taken from Elfin Inc.’s financial statements:
Cost of goods available for sale $70,000
Manufacturing overhead 20,000
Cost of goods manufactured 69,000
Finished goods inventory — Ending 10,000
Direct materials used 16,000
Sales 130,000
Selling and administrative expenses 25,000
Direct labour 23,000
Work in process inventory — Beginning 15,000

b. What was the gross margin for April?

1. $ 45,000
2. $ 55,000
3. $ 61,000
4. $ 70,000

c. What was the work-in-process inventory at the end of April?

1. $ 0
2. $ 5,000
3. $ 8,000
4. $ 143,000

d. What was the finished goods inventory at the beginning of April?

1. $ 0
2. $ 1,000
3. $ 10,000
4. $ 139,000

e. Crossland Company’s manufacturing overhead cost is 35% of its prime cost. The direct labour cost for the last period was $58,800 and the direct materials cost was $30,000 and the total selling expenses were $50,000. What was the manufacturing overhead cost?

1. $ 28,000
2. $ 31,080
3. $ 38,000
4. $ 48,580

f. A manufacturing company prepays its insurance coverage for a five-year period. The premium for the five years is $24,000 and is paid at the beginning of the first year. Four-fifths of the premium applies to factory operations and one-fifth applies to selling and administrative activities. What amount of insurance should be considered product and period costs respectively for the first year of coverage (assume 100% of all products manufactured are sold)?

<table>
<thead>
<tr>
<th>Product</th>
<th>Period</th>
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<tbody>
<tr>
<td>1. $960</td>
<td>$3,840</td>
</tr>
<tr>
<td>2. $3,840</td>
<td>$960</td>
</tr>
<tr>
<td>3. $4,800</td>
<td>$19,200</td>
</tr>
<tr>
<td>4. $19,200</td>
<td>$4,800</td>
</tr>
</tbody>
</table>

Answer items g) and h) using the following information.

The Clyde Company had the following data for the month of November 2006:
Inventories

<table>
<thead>
<tr>
<th></th>
<th>11/1/06</th>
<th>11/30/06</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw materials</td>
<td>$36,000</td>
<td>?</td>
</tr>
<tr>
<td>Work in process</td>
<td>24,000</td>
<td>30,000</td>
</tr>
<tr>
<td>Finished goods</td>
<td>?</td>
<td>16,000</td>
</tr>
</tbody>
</table>

Additional data:
- Sales revenue: $218,000
- Direct labour costs: 24,000
- Manufacturing overhead costs: 28,000
- Selling expenses: 32,000
- Administrative expenses: 36,000

**g.** If the cost of raw materials purchased in November was $26,000 and the cost of goods manufactured was $84,000, then what was the inventory of raw materials on November 30?

1. $6,000
2. $18,000
3. $24,000
4. $30,000

**h.** If the cost of goods manufactured for November was $84,000 and net income was $76,000, then what was the finished goods inventory on November 1?

1. $0
2. $4,000
3. $20,000
4. $42,000

**Solution**

**Question 3**

Textbook, Problem 2-14, page 57.

**Solution**

**Question 4**


**Solution**

**Question 5**

Textbook, Question 1-7, page 22.

**Solution**

**Question 6**


**Solution**

**Question 7**

Solution

Question 8

Textbook, Exercise 1-1, page 22.

Solution
Self-test 1

Solution 1

Multiple choice

a. 3)

If manufacturing overhead is understated, then cost of goods manufactured on the income statement will be understated.

b. 2)

Enterprise risk management focuses on identifying and managing risks, not on processes. Lean production, six sigma, and enterprise systems focus on improving processes.

c. 3)

Unlike financial accounting, there are no required standards of acceptability for managerial accounting, which results in a relatively flexible structure.

d. 2)

Variable costs change in proportion to changes in volume of activity. For example, the cost of fuel to fly an airplane is a variable cost; the more you fly, the greater the fuel consumption.

e. 3)

Utility costs related to the retail space are a period cost that would be part of the selling expenses listed under the operating expenses on the income statement.

f. 1)

A sunk cost is one already incurred and cannot be changed and is therefore irrelevant in the decision making process.

g. 4)

Determining whether a cost is fixed or variable is based on how it behaves.

h. 4)

The three basic cost elements in the manufacture of a product are: direct materials, direct labour, and manufacturing overhead.

i. 1)

Direct materials handling is a product cost. Advertising, amortization on the store equipment, and property taxes on the retail space are all recorded as period costs when incurred.

j. 2)

Work in process inventory consists of those units that are left unfinished at the end of the accounting period.

k. 2)
A JIT system acquires inventory only when needed in the production process; it is therefore a means of controlling inventory costs.

3)

Technically, the term Six Sigma refers to a process that generates no more than 3.4 defects per million opportunities. Text, page 18
**Self-test 1**

**Solution 2**

**Multiple choice**

a. 2)

Sales COGS = G.M.
$150,000 - COGS = $80,000; COGS = 70,000
FG beginning + COGM - COGS = FG end
$25,000 + 70,000 - 70,000 = 25,000 = FG end

b. 4)

$70,000 - $10,000 = $60,000 cost of goods sold; $130,000 - $60,000 = $70,000 gross margin.

c. 2)

$15,000 + $23,000 + $16,000 + $20,000 - x = $69,000; x = $5,000 ending work in process inventory.

d. 2)

x + $69,000 = $70,000; x = $1,000 beginning finished goods inventory.

e. 2)

$58,800 + $30,000 = $88,800; $88,800 x .35 = $31,080 manufacturing overhead cost.

f. 2)

$24,000 ÷ 5 = $4,800/year x 4/5 = $3,840 product cost; $4,800 - $3,840 = $960 period cost.

g. 3)

$36,000 + $26,000 - [$84,000 - ($24,000 + $24,000 + $28,000 - $30,000)] = $24,000.

**Note:** The following detailed calculations should help you understand the rationale behind the solution, and assist you in developing logical solutions for MA1 questions:

*Step 1.* Determine the raw materials available ($36,000 raw materials beginning + $26,000 raw material purchases = $62,000 raw materials available).

*Step 2.* Determine the raw materials used in the cost of goods manufactured ($24,000 direct labour + (x) direct materials + $28,000 manufacturing overhead = $84,000 cost of goods manufactured. Direct materials are $32,000.

*Step 3.* Determine the ending raw materials balance (taking into consideration the changes in work-in-process) ($62,000 raw materials available - $32,000 direct materials + $24,000 work-in-process beginning - $30,000 work-in-process ending = $24,000).

h. 2)

$218,000 - (x + $84,000 - $16,000) - $32,000 - $38,000 = $76,000; thus, x = $4,000.
Self-test 1

Solution 3

Problem 2-14

1. Total wages for the week:
   
   Regular time: 40 hours × $24 per hour ........................................... $ 960
   Overtime: 5 hours × $36 per hour ............................................... 180
   Total wages ................................................................................. $ 1,140
   
   Allocation of total wages:
   
   Direct labour: 45 hours × $24 per hour ........................................... $ 1,080
   Manufacturing overhead: 5 hours × $12 per hour ......................... 60
   Total wages ................................................................................. $ 1,140

2. Total wages for the week:
   
   Regular time: 40 hours × $24 per hour ........................................... $ 960
   Overtime: 10 hours × $36 per hour .............................................. 360
   Total wages ................................................................................. $ 1,320
   
   Allocation of total wages:
   
   Direct labour: 46 hours × $24 per hour ........................................... $ 1,104
   Manufacturing overhead:
   
   Idle time: 4 hours × $24 per hour ................................................. $ 96
   Overtime premium: 10 hours × $12 per hour .............................. 120
   216
   Total wages ................................................................................. $ 1,320

3. Total wages and fringe benefits for the week:
   
   Regular time: 40 hours × $24 per hour ........................................... $ 960
   Overtime: 8 hours × $36 per hour .................................................. 288
   Fringe benefits: 48 hours × $8 per hour ..................................... 384
   Total wages and fringe benefits .................................................. $ 1,632
   
   Allocation of wages and fringe benefits:
   
   Direct labour: 45 hours × $24 per hour ........................................... $ 1,080
   Manufacturing overhead:
   
   Idle time: 3 hours × $24 per hour ................................................ $ 72
   Overtime premium: 8 hours × $12 per hour ................................. 96
   Fringe benefits: 48 hours × $8 per hour .................................... 384
   552
   Total wages and fringe benefits .................................................. $ 1,632
4. Allocation of wages and fringe benefits:

<table>
<thead>
<tr>
<th>Description</th>
<th>Hours</th>
<th>Rate</th>
<th>Amount</th>
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<tr>
<td>Direct labour:</td>
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<td></td>
<td></td>
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<tr>
<td>Wage cost: 45 hours × $24 per hour</td>
<td>45</td>
<td>$24</td>
<td>$1,080</td>
</tr>
<tr>
<td>Fringe benefits: 45 hours × $8 per hour</td>
<td>45</td>
<td>$8</td>
<td>360</td>
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<tr>
<td>Manufacturing overhead:</td>
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<td>Idle time: 3 hours × $24 per hour</td>
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<td>$24</td>
<td>72</td>
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<tr>
<td>Total wages and fringe benefits</td>
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<td>$1,632</td>
</tr>
</tbody>
</table>
1. **Skyler Company**  
   **Schedule of Cost of Goods Manufactured**  
   **For the Month Ended June 30**

   **Direct materials:**  
   - Raw materials inventory, June 1: $17,000  
   - Add: Purchases of raw materials: $190,000  
   - Raw materials available for use: $207,000  
   - Deduct: Raw materials inventory, June 30: $42,000  
   - Raw materials used in production: $165,000  
   - Direct labour: $90,000  

   **Manufacturing overhead:**  
   - Rent on facilities (80% × $40,000): $32,000  
   - Insurance (75% × $8,000): $6,000  
   - Utilities (90% × $50,000): $45,000  
   - Indirect labour: $108,000  
   - Maintenance, factory: $7,000  
   - Depreciation, factory equipment: $12,000  

   **Total overhead costs:** $210,000  
   **Total manufacturing costs:** $465,000  
   **Add: Work in process inventory, June 1:** $70,000  
   **Deduct: Work in process inventory, June 30:** $85,000  
   **Cost of goods manufactured:** $450,000

2. **Skyler Company**  
   **Income Statement**  
   **For the Month Ended June 30**

   **Sales:** $600,000
   **Cost of goods sold:**  
   - Finished goods inventory, June 1: $20,000  
   - Add: Cost of goods manufactured: $450,000  
   - Goods available for sale: $470,000  
   - Deduct: Finished goods inventory, June 30: $60,000  
   **Gross margin:** $190,000
   **Selling and administrative expenses:**  
   - Selling and administrative salaries: $35,000  
   - Rent on facilities (20% × $40,000): $8,000  
   - Depreciation, sales equipment: $10,000  
   - Insurance (25% × $8,000): $2,000  
   - Utilities (10% × $50,000): $5,000  
   - Advertising: $80,000  
   **Operating income:** $50,000

3. In preparing the income statement shown in the text, the accountant failed to distinguish between product costs and period costs, and also failed to recognize the change in inventories between the beginning and end of the month. Once these errors have been corrected, the financial condition of the company looks much better and selling the company may not be advisable.
Self-test 1

Solution 5

A line position is directly related to the achievement of the basic objectives of the organization. A staff position is not directly related to the achievement of those objectives; rather, it is supportive, providing services and assistance to other parts of the organization.

Self-test 1

Solution 6

Problem 1-4

1. No, Sarver did not act in an ethical manner. In complying with the president’s instructions to omit liabilities from the company’s financial statements he was in direct violation of normal ethical conduct. He violated both the “Integrity” and “Objectivity” guidelines of a code of ethical conduct. The fact that the president ordered the omission of the liabilities is irrelevant.

2. No, Sarver’s actions can’t be justified. In dealing with similar situations, the securities regulators have consistently ruled that "...corporate officers...cannot escape culpability by asserting that they acted as ‘good soldiers’ and cannot rely upon the fact that the violative conduct may have been condoned or ordered by their corporate superiors." (Quoted from: Gerald H. Lander, Michael T. Cronin, and Alan Reinstein, "In Defense of the Management Accountant;" *Management Accounting*, May, 1990, p. 55) Thus, Sarver not only acted unethically, but he could be held legally liable if insolvency occurs and litigation is brought against the company by creditors or others. It is important that students understand this point early in the course, since it is widely assumed that "good soldiers" are justified by the fact that they are just following orders. In the case at hand, Sarver should have resigned rather than become a party to the fraudulent misrepresentation of the company’s financial statements.

Self-test 1

Solution 7

Problem 1-7

1. If all automotive service shops routinely tried to sell parts and services to customers that they didn't really need, most customers would eventually figure this out. They would then be reluctant to accept the word of the service representative that a particular problem needs to be corrected—even when there is a legitimate problem. Either the work would not be done, or customers would learn to diagnose and repair problems themselves, or customers would hire an independent expert to verify that the work is really needed. All three of these alternatives impose costs and hassles on customers.

2. As argued above, if customers could not trust their service representatives, they would be reluctant to follow the service representative's advice. They would be inclined not to order the work done even when it is really necessary. And, more customers would learn to do automotive repairs and maintenance themselves. Moreover, customers would be unwilling to pay as much for work that is done since customers would have reason to believe that the work may be unnecessary. These two effects would reduce demand for automotive repair services. The reduced demand would reduce employment in the industry and would lead to lower overall profits.

Self-test 1

Solution 8

Exercise 1-1

1. Managerial accounting, financial accounting
2. Planning
3. Directing and motivating
4. Feedback
5. Decentralization
6. Line
7. Staff
8. Controller
9. Budgets
10. Performance report
11. Chief Financial Officer
12. Precision; nonmonetary data