Module 1: Basic concepts of management accounting

Required reading

- Chapter 1, pages 4-23
- *ERH*, Section C3: "Code of ethical principles and rules of conduct"
- Reading 1-1: "Moral responsibility within the corporation"
- Chapter 2, pages 32-50

Overview

Welcome to MA1. This module serves as a foundation for the course, providing a perspective of management accounting and how it relates to financial accounting. Module 1 looks at the practice and terminology of management accounting. The changing business environment and how these changes affect the practice of management accounting are described. An overview of the basic concepts of identifying and classifying costs is presented, including cost behaviour. This module also looks at manufacturing and non-manufacturing costs.

Learning objectives

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

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

1.3 Identify job descriptions as either line or staff positions and explain the problems that can arise between the two. (Level 2)

1.4 Explain the basic concepts underlying just-in-time (JIT), total quality management (TQM), process re-engineering, and the theory of constraints (TOC). (Level 2)

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

1.6 Identify and give examples of each of the three basic cost elements involved in the manufacture of a product. (Level 2)

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

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

1.1 The manager's need for information

LEVEL 2
In FA1, 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 will study accounting information typically provided to users internal to the organization. Management accounting serves the needs of users within the organization, such as managers.

In order to achieve organizational objectives, the management team is responsible for planning, directing, motivating, and controlling the activities of the business. In this course, you will 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, whole new systems are designed to meet the needs of the financial accounting system. In some organizations, whole new systems are designed to meet the needs of the managers.

### 1.2 Comparing financial and managerial accounting

**LEVEL 2**

The financial accounting system captures the results of past transactions in financial terms, that is, 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 the manager monitor the 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 1-2 for a detailed comparison of financial and management accounting.

### 1.3 Organizational structure

**LEVEL 2**

Some form of decentralization will 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, there are companies that retain control at headquarters and are reluctant to delegate responsibility and the related authority to the branches or divisions.

An organization chart shows how responsibility, or chain of command, is divided within an entity. Exhibit 1-3 shows an example of an organization chart. Informal relationships are common and should be considered alongside formal ones when management control and internal control are evaluated.

Note the difference between line and staff positions. The relationship that exists between accountants and the accounting personnel is a line relationship. However, the work done by accountants for and with other departments' personnel is said to be a staff relationship.
1.4 The changing business environment

LEVEL 2

There has been tremendous change in the business environment over the past two decades. The rapid pace of change will continue or accelerate over the next decade. Those organizations that can keep pace or lead the change will survive and succeed. Many organizations will not survive because they cannot respond to the ever-changing needs of the consumer.

The major programs or approaches being used by organizations to succeed in this competitive environment are trying to improve the quality of the products or services offered by the organization or reduce the costs of providing these products or services. Offering quality products or services at the lowest possible cost is the key to success for all organizations whether they are profit oriented, non-profit oriented, or government organizations. You will study these programs/approaches in more detail in later parts of this course and in future courses of the CGA program.

Just-in-time (JIT) inventory systems

JIT systems deal with the physical flow of goods through the manufacturing process. The physical flow may not be the same as the cost flow. For example, inventory may move through the system in the order in which it arrives at the factory. However, the costs may go through the income statement as a weighted average of the costs.

Just-in-time systems are designed to reduce the amount of inventory that is in the system. The inventory that is usually affected by just-in-time is raw materials. The cost of raw materials is not only their purchase price but also the cost of storage, security, insurance, spoilage, obsolescence, and personnel to handle the raw materials. A just-in-time system minimizes the amount of raw materials that a company has in stock. Many companies have also adopted JIT with respect to finished goods inventory. This also reduces the amount of cash tied up in inventory and storage-related costs.

JIT systems can help a company save money. However, there are disadvantages. Companies are dependent on raw materials arriving exactly when needed, and materials received must be defect free. A company will not normally carry enough raw materials to be able to continue work if there is a strike at a supplier's company. JIT for finished goods inventory requires close communications between the company and its major customers.

Another characteristic of JIT is that the workforce must be able to perform more than one specialized task. This is because the JIT system has only small quantities of raw materials moving through the process. There are not enough raw materials in the system to enable a person to perform only one job.

JIT systems are becoming more common in North American manufacturing plants. While JIT reduces the amount of inventory a plant must carry, it is common to see increased inventories carried by suppliers. You will learn more about JIT throughout this course.

Other improvement programs

Other improvement programs include total quality management (TQM), process re-engineering, and the theory of constraints (TOC). When properly implemented, these can reduce cost and inefficiency, ultimately enhancing quality and increasing profits.
1.5 Ethical standards

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 electronically under the Resources tab.)

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.

Reading 1-1 provides an overview of the many kinds of moral responsibility relationships that should exist in corporations. The reading indicates responsibilities of corporations to external stakeholders: The general public, customers, suppliers, and so on. It also provides an analysis of key responsibilities within the organization, such as the CEO's responsibility to the board and the board's responsibility to shareholders.

Here are the ethical implications of the first three topics:

- **The manager's need for information** 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 was concerned with **organizational structure**, particularly decentralization in contemporary business (and in the public sector as well). Important ethical elements for the management accountant working in a decentralized environment will likely be in the area of information coordination. The management accountant will have to show initiative and take responsibility. In terms of taking responsibility, it is extremely important for you to understand that in those situations where corporate superiors request and/or permit management accountants to engage in unethical behaviour, the accountant is guilty and will be held legally liable; in short, "following orders" is not justification for unethical behaviour.

- Topic 1.3 discussed the **changing environment** in business related to JIT manufacturing. This has significant ethical implications in terms of the pressures created on organizations as either consumers or providers of JIT products and services. The need for high efficiency and reliability is obvious but it 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. A further example of the changing environment in business is outsourcing; it would be disastrous to outsource ethical reliability and conscientiousness.

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

Online 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 pages 23-24 and go to the Online Learning Centre, click Contents, choose Chapter 1, select Chapter Summary and review the material thoroughly. If you are unclear on how to access or use this
Site, refer to the Online Learning Centre (OLC) Guide in the course navigation pane.

1.6 General cost classifications

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 elements:

- Direct materials
- Direct labour
- Manufacturing overhead

**Conversion costs** are direct labour and manufacturing overhead. **Prime costs** are direct labour and direct material. *Note: 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 amortization 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. Amortization 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** that include selling costs and general and administrative costs. In addition, 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 will be covered in Module 5.

In classifying various 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. For this reason, these costs are 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 the various cost terms.

1.7 Cost classifications on financial statements

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 2-3. Review the format and headings for this schedule.

1.8 Costs for planning, costing, and decision making

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.

- **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. It should be noted that given unlimited resources, any cost can be traced. However, in business, resources are limited so the cost-benefit must always be considered. You will encounter this concept again in Module 6 when you study segment analysis.

- **Differential, opportunity, and sunk costs** are terms used in problem solving and decision analysis. Students traditionally have difficulty understanding these concepts so study these terms carefully.

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**Activity 1-1 Differentiating costs**

This activity reinforces your understanding of cost types.

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**Online 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 pages 50-51, work through the review problems on pages 51-53, and go to the Online Learning Centre, click Contents, choose Chapter 2, select Chapter Summary and review the material thoroughly. If you are unclear on how to access or use this site, refer to the Online Learning Centre (OLC) Guide in the course navigation pane.
Module 1 summary

Module 1 is about various issues related to management accounting.

Topic 1.1 discusses what managers do and their information needs 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 new issues management accountants should cope with as a result of 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.

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

Topic 1.7 gives a refresher as to where costs are located in financial statements of merchandizing concerns and manufacturing settings.

Finally, 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 principles is **not** a result of the focus on customer orientation?

   1. Just-in-time (JIT) manufacturing
   2. Process re-engineering
   3. Continuous improvement
   4. Total quality management (TQM)

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. Amortization 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. A just-in-time (JIT) system 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 having all managers and employees strive toward higher standards and reduced numbers of defects?
   1. Total quality management
   2. Continuous improvement
   3. Just-in-time
   4. Theory of constraints

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 were 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 prepay 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>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></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:

<table>
<thead>
<tr>
<th>Invenories</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>$</td>
<td>16,000</td>
</tr>
<tr>
<td>Additional data:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales revenue</td>
<td>$</td>
<td>218,000</td>
</tr>
<tr>
<td>Direct labour costs</td>
<td></td>
<td>24,000</td>
</tr>
<tr>
<td>Manufacturing overhead costs</td>
<td>28,000</td>
<td></td>
</tr>
<tr>
<td>Selling expenses</td>
<td>32,000</td>
<td></td>
</tr>
<tr>
<td>Administrative expenses</td>
<td>38,000</td>
<td></td>
</tr>
</tbody>
</table>

(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 2-13, pages 67-68.

Solution

Question 4

Textbook, Problem 2-21, pages 72-73.

Solution
Question 5
Textbook, Question 1-5, page 24.

Solution

Question 6

Solution

Question 7

Solution

Self-test - Content Links

Solution 1

Multiple choice

a. 3)

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

b. 1)

JIT focuses on cost reduction. Process engineering, continuous improvement, and TQM are all focused on customers, either directly or indirectly.

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.

l. 1) Total quality management, or TQM, is a management concept that calls for all managers and employees to attain higher standards and reduced the number of defects.

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 - \times = $69,000; \times = $5,000$ ending work in process inventory.

d. 2) 
\times + $69,000 = $70,000; \times = $1,000$ beginning finished goods inventory.

e. 2) 
$58,800 + $30,000 = $88,800; $88,800 \times .35 = $31,080$ manufacturing overhead cost.

f. 2) 
$24,000 \div 5 = $4,800/year \times 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))] = $24,000.$

h. 2) 
$218,000 - (\times + $84,000 - $16,000) - $32,000 - $38,000 = $76,000; thus, \times = $4,000.$
Solution 3
Problem 2-13

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

Solution 4

Problem 2-21

VALENKO COMPANY
Schedule of Cost of Goods Manufactured

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw materials inventory, beginning</td>
<td>$50,000</td>
</tr>
<tr>
<td>Add: Purchases of raw materials</td>
<td>$260,000</td>
</tr>
<tr>
<td>Raw materials available for use</td>
<td>$310,000</td>
</tr>
<tr>
<td>Deduct: Raw materials inventory, ending</td>
<td>$40,000</td>
</tr>
<tr>
<td>Raw materials used in production</td>
<td>$270,000</td>
</tr>
<tr>
<td>Direct labor</td>
<td>$65,000</td>
</tr>
<tr>
<td>Insurance, factory</td>
<td>$8,000</td>
</tr>
<tr>
<td>Rent, factory building</td>
<td>$90,000</td>
</tr>
<tr>
<td>Utilities, factory</td>
<td>$52,000</td>
</tr>
<tr>
<td>Cleaning supplies, factory</td>
<td>$6,000</td>
</tr>
<tr>
<td>Depreciation, factory equipment</td>
<td>$110,000</td>
</tr>
<tr>
<td>Maintenance, factory</td>
<td>$74,000</td>
</tr>
<tr>
<td>Total overhead costs</td>
<td>$340,000</td>
</tr>
<tr>
<td>Total manufacturing costs</td>
<td>$675,000</td>
</tr>
<tr>
<td>Add: Work in process inventory, beginning</td>
<td>$68,000</td>
</tr>
<tr>
<td>Deduct: Work in process inventory, ending</td>
<td>$33,000</td>
</tr>
<tr>
<td>Cost of goods manufactured</td>
<td>$630,000</td>
</tr>
</tbody>
</table>

1. *These items must be computed by working backwards up through the statements. An effective way of doing this is to record the form and known balances, and then work toward the unknown figures.*

2. **Direct materials:** $270,000 ÷ 30,000 units = $9.00 per unit
   Rent, factory building: $90,000 ÷ 30,000 units = $3.00 per unit

3. **Direct materials:**
   Per unit: $9.00 (unchanged)
   Total: 50,000 units × $9.00 per unit = $450,000
   Rent, factory building:
   Per unit: $90,000 ÷ 50,000 units = $1.80 per unit
   Total: $90,000 (unchanged)

4. **The unit cost for rent dropped from $3.00 to $1.80 because of the increase in production between the two years. Since fixed costs do not change in total as the activity level changes, they will decrease on a unit basis as the activity level rises.**

Solution 5

1-5 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.


Solution 6

Problem 1-5

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 immaterial.

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.


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.

Moral Responsibility within the Corporation
by Richard T. De George

Corporations are the result of free agreements, even if most owners do not know what management does. They purchase stock, knowing that they will not have control and knowing that they will gain or lose, depending on how effectively management runs the corporation. They know that the corporation may be sued, they know it may make a profit or suffer losses, and they know in general how such things happen. Shareholders agree to invest money, and they understand what this means. The corporation in turn acts under the direction of management. The corporation owns property, produces and sells goods, is liable for what it produces, and for its commitments.

There may be some things for which the corporation as a whole is responsible. But because the corporation acts only through the agency of those who work for it, we can often identify who within the corporation has responsibility for what. The shareholders and the owners of the corporation are legally represented by the board of directors, whose job it is, among other things, to look out for the interests of the shareholders. The board of directors oversees management. Management has the task of organizing the corporation in such a way that it can effect its end—make and market a product, profitably. Management is responsible to the board for what it does. In a large firm there are usually levels of management. Top management sets policy; middle management implements the broad policies by breaking them down into components and devising a strategy for achieving them; lower management implements the decisions made by middle management, by organizing and hiring the workers who actually engage in the production of the goods. Management is responsible for what is produced and for how it is produced. It is responsible to the workers for the conditions under which they work, and to the consumers for the quality of goods produced. The workers are responsible for doing the jobs for which they are paid.

The corporation as a whole is responsible for fulfilling its contracts to the other firms with which it deals—that is, for delivering what was promised when and as promised, for paying the debts it incurs in its operation, and so on. The corporation is responsible to the consumer for the goods it sells. The corporation is also responsible to the general public, or to society, for the actions it takes that affect the public or society in general. All of these obligations can be deduced from the rule that every rational agent is responsible for his actions, and is responsible to those whom his actions seriously affect. Each such agent is morally responsible for wrongful injury done to another. To the extent that the corporation acts, it is responsible for its actions, although it is the people within the corporation who must act, in order for the corporation to fulfill its obligations. Let us look a little more closely at each level of the corporation, and at the kinds of moral responsibility of each.

In a large corporation, responsibility falls primarily on the board of directors. The board members are the legal overseers of management. The members of the board are responsible to the shareholders for the selection of honest, effective managers, and especially for the selection of the president of the corporation. They may also be responsible for choosing the executive vice-president and other vice-presidents. They are morally responsible for the tone of the corporation and for its major policies; they can set a moral tone or they can condone immoral practices. They can and should see that the company is managed honestly and that the interests of the shareholders are cared for instead of ignored by management.

Board members are also responsible for agreeing to major policy decisions, and for the general well-being of the corporation. The members are morally responsi-
ble for the decisions they make, as well as for the decisions they should make but fail to make. To be effective in their roles as protectors of the interests of the shareholders and judges of the performance of management, they should be separate from management. Members of the board cannot be objective in their evaluation of management if they are also members of management. If the president and the chairman of the board are one and the same person, for instance, we can hardly expect the board to be as objective as it should be in fulfilling its responsibility vis-à-vis management. Nor can we expect impartial evaluation of management if the board is composed of people appointed or recommended by management because of mutual ties. We can also not expect a board to be effective if it is not informed by management of what management is doing, if the board does not have access to all information about the firm it thinks necessary, and if its members do not have the time to investigate what should be investigated.

The increasing incidence of corporate takeovers raises special problems for boards of directors. When one company takes over another, no productive resources are increased, no jobs are created, and, from the point of view of society, there is no net increase of any kind. One company might take over another in order to diversify its holdings and so hedge against a decline in any portion of its operations. Or it might take over a firm that produces an item that it usually purchases from external suppliers. Sometimes one firm might take over another firm because its physical assets are greater than its market price—a good investment—or it might take over a smaller competitor. Sometimes takeovers are friendly, and in the best interest of all parties; but sometimes takeovers are unfriendly, and are fought by the board or management of the firm being acquired.

Although board members are required to act in the best interests of the shareholders of the firm, in takeovers, there is often controversy over whether the members are acting for the benefit of the shareholders or for their own personal interests. The situation becomes especially acute when the president and other top executives on the board of a firm will lose their jobs as a result of a takeover. Matters are sometimes further complicated by competing bids by different companies for the same firm. Whatever the complications, the board is morally and legally responsible for the interests of the shareholders, and must resist the temptation to act out of personal interest and advantage, which might be to the detriment of the shareholders.

Management is responsible to the board. It must inform the board of its actions, the decisions it makes or the decisions to be made, the financial condition of the firm, its successes and failures, and the like. Management is responsible, through the board, to the shareholders. It is responsible to the shareholders for managing the firm honestly and efficiently. Management is not morally responsible for maximizing profits, for increasing the worth of the company's stock, or for higher quarterly sales or profits. Although these are all reasonable goals at which management may aim, shareholders have no right to any of these; if management acts as best it can within its proper moral and legal bounds, it cannot, strictly speaking, be faulted for not achieving them. If managers fail to produce as the board thinks they should, they may be fired or replaced. But that is different from their fulfilling or not fulfilling their moral obligations. Shareholders know that a corporation's stock may decrease as well as increase in value, and that profits may increase or decline. They should also know that profit maximization cannot morally override a firm's moral and legal obligations. Although shareholders may desire short-term profits, they have no right to them, and managers should manage for the long-term benefit of the firm as well as for short-term results.
Management is also responsible to the workers. It both hires them and provides for the conditions of work. In hiring workers it has the obligation to engage in what have become known as fair employment practices. These include following equitable guidelines and not discriminating on the basis of sex, race, religion, or other non-job-related characteristics. Once a worker is hired, there is a continuing obligation of fairness in evaluation, promotion, and equitable treatment. These are moral matters, which may or may not be specified in contracts but are implied in the hiring of one person by another. It is not moral for management to ignore unsafe working conditions. For instance, it should not endanger workers by failing to provide screening from dangerous machines, where appropriate, by not supplying goggles for work where fragments may cause blindness; by not supplying adequate ventilation; and, in general, by ignoring the needs of workers as human beings.

Employers are not free to set any terms they wish as conditions of employment. They have a moral obligation to employees even if these are not spelled out in contracts or by government regulations. Government regulations, such as those imposed by the Occupational Safety and Health Act (OSHA) make explicit many of the conditions employers are morally as well as legally obliged to fulfill with respect to the safety and health of their employees. The OSHA regulations are sometimes inappropriate for certain firms, or are based on codes inappropriate to particular enterprises. Where inappropriate, the regulations can and should be changed. But if employers had lived up to the moral obligation to provide adequate conditions of safety and health for their employees, there would have been no need for OSHA regulations.

Workers, in turn, are responsible for doing the jobs for which they are hired. This obligation is captured in the dictum “a fair day’s work for a fair day’s pay.” Failure to live up to this obligation is reasonable ground for discharge. From a moral point of view one’s job can never legitimately involve either breaking the law or doing what is unethical, even if one is ordered to do so. But within the guidelines of one’s job description, employees are expected to carry out their jobs as instructed by those above them. They are hired for specific tasks that they are expected to fulfill to the best of their ability—carefully, skillfully, and on time.

Corporations are responsible to their suppliers and competitors for fair treatment. Corporations deal with other firms as well as with the general public. They may buy raw or semifinished materials, parts, or a variety of supplies from others. In their dealings they are responsible for acting fairly, both in supplying and in receiving goods and services. If bidding is used, the bidding should be fair for all. If prices are agreed upon, they should be honored. If specifications are set, they should be met. If payment by a certain date is agreed upon, it should be adhered to. All this is fairly obvious, yet not always observed. The temptations for cutting corners, for cost-overruns, for manipulating bids, and for seeking and receiving preferential treatment are ever-present, and an ethical firm needs to guard constantly against them through a clearly stated and enforced company policy.

Fairness to one’s competitors is also required. In a competitive situation no firm has any obligation to help a competing firm, and frequently competition involves gaining greater market share at a competitor’s expense, hiring better workers and managers than one’s competitor, charging less for similar products, producing better products, and the like. All of this is morally acceptable. If, as a result of fair competition, a competing firm goes out of business, the successful firm has no moral responsibility to the failing one. The key word, however, is fair. Fairness precludes lying about one’s competitor or the competitor’s products; it precludes stealing trade secrets, sabotage, or other direct intervention in the competitor’s firm. Fairness in dealing with one’s competitor also precludes
colluding with competing firms, price fixing, manipulating markets, and in other ways acting to undermine fair competition at the public’s expense.

The corporation is responsible to the consumer for its products. The goods produced should be reasonably safe. This means that the ordinary user is exposed to only a certain acceptable risk level that is known by the user, when using the product. For example, people do not expect to get shocked or electrocuted when they plug in an electrical appliance. They do not buy such appliances expecting to take that risk. A product that shocks or electrocutes them when plugged in is defective, causes harm to the consumer, and violates the contract involved in the purchase of the product. Goods must be as advertised or labeled, and the labeling should be adequate, so the buyer knows what he is buying. Because adequate knowledge is one of the ingredients of a fair transaction, it is the obligation of the manufacturer to inform the purchaser of those significant qualities that the purchaser cannot observe for himself. For instance, the kind of material a garment is made of is pertinent, as is the horsepower of a vehicle. Also, goods should be reasonably durable; they should not fall apart on first use. Warranties should be clear and honored. The customer buys a product for a certain price. He should know what he is getting, and he has a moral right to have certain expectations fulfilled. Obviously there are various grades of goods. Some are more expensive than others and may be correspondingly safer, more durable, more reliable, more attractive, and made of better-quality components than cheaper products. For any transaction to be fair the consumer must have adequate information and his reasonable expectations must be fulfilled by a product, or there must be adequate notice that the ordinary expectation in the given case will not be fulfilled. Damaged goods can be sold if marked as damaged. “Seconds” may be sold as seconds, but to sell them as “first quality” is immoral.

These few examples do not exhaust the responsibilities of corporations to consumers. We have not questioned the morality of built-in obsolescence, of purposeful lack of standardization, which locks a consumer into a certain line of products, of failure to develop certain products, or of preventing the production of items that would benefit the consumer but hurt a particular industry or manufacturer. But we have illustrated enough of the moral responsibilities of a corporation to consumers to indicate where its moral obligations in this area lie, and how they can be ascertained.

Finally, the corporation is morally responsible for its actions to the general public or to society in general. In particular, it has the moral obligation not to harm those whom its actions affect. We can group these obligations under three major headings. The first can be called its obligation not to harm the environment that it shares with its neighbors. It has the obligation not to pollute the air and water beyond socially acceptable levels, and also to control its noise pollution. It is obliged to dispose of toxic and corrosive wastes so as not to endanger others. It must reclaim and restore the environment to a socially acceptable level, if its operation despoils the environment.

The second group of moral obligations to the general public concerns the general safety of those who live in an area affected by a company’s plant. A company has no right to expose those people living near it to a health risk from possible explosion or radiation. Some jobs involve a high risk, and those who knowingly take this risk are paid accordingly. But a plant has no right to expose its neighbors, even its distant neighbors, to dangers without their consent. Similarly, a corporation has an obligation to the general public for the safety of its products. For instance, substandard tires endanger not only those who purchase them but those whom the purchaser may kill or injure in an accident that the tires may cause.
The third set of responsibilities to the public concerns the location, the opening, and the closing of plants—especially in small communities and one-industry towns. These actions affect not only the corporation and its workers but also the communities in which the plants are located. Plant openings can affect a community positively or negatively, just as closings can. A corporation must consider, from a moral point of view, the impact of its actions on the community in these matters. This is not to say that plants can never morally be closed or opened. In both opening and closing a plant, a corporation has the obligation to minimize the harm, and so to consider a variety of strategies to achieve this end.

The opening of a plant may involve a large commitment on the part of the community in which it is located. The community, for example, may have to add sewer lines, increase its fire and police department personnel, and add to its social services personnel. Developers build houses for the increased employment the plant makes available. Businesses spring up to provide support services. Schools may be built to educate the children of the workers. The city or county begins to count on the increased tax base the plant represents. All of this results from the new plant. The corporation does not always ask that all this happen, but it at least expects that its workers will be provided housing and services in response to market demand.

The community may thus be said to provide indirect support to the plant. The corporation should, therefore, not ignore the community's contribution to its operation when it considers closing the plant. It may have no legal duty to consider the community with which it has been associated; but morally, it does have an obligation to consider the effects of its action and to minimize the harm its closing will cause the community.

If we ask who has the obligation to do all this, the answer is, the corporation. Management has the major role to play. Yet both the members of the board and the individual workers may find, on occasion, that they have the moral responsibility to take certain actions to satisfy the corporation's responsibility to the general public.

Since the corporation has responsibility to a great many constituencies, it is not accurate to claim that a corporation owes allegiance only to the owners or shareholders of the firm. Nor is it clear from a moral point of view that the interests of the shareholders always take precedence over other interests. For instance, the moral obligations of the firm to ensure the safety of workers, the environment, and consumers properly take precedence over increasing profits.

All those to whom the corporation has any moral obligations are collectively referred to as stakeholders in the corporation. A stakeholder analysis consists of weighing and balancing all of the competing moral demands on a firm by each of those who have a claim on it, in order to arrive at the firm's moral obligation in any particular case. The stakeholder approach has the strength of forcing us to consider carefully all the obligations involved, for instance, in a plant closing, instead of just looking at the closing from the point of view of profitability, and so from the point of view of the shareholders. The stakeholders in a plant closing include not only shareholders but also workers, suppliers, consumers, the local community, and possibly others. A stakeholder analysis does not preclude the interests of the shareholders overriding the interests of the other stakeholders affected but it ensures that all affected will be considered. The stakeholder approach is compatible with utilitarian and deontological approaches, as well as with using second-order moral judgments. It simply requires that all those whose interests are involved get fair consideration.