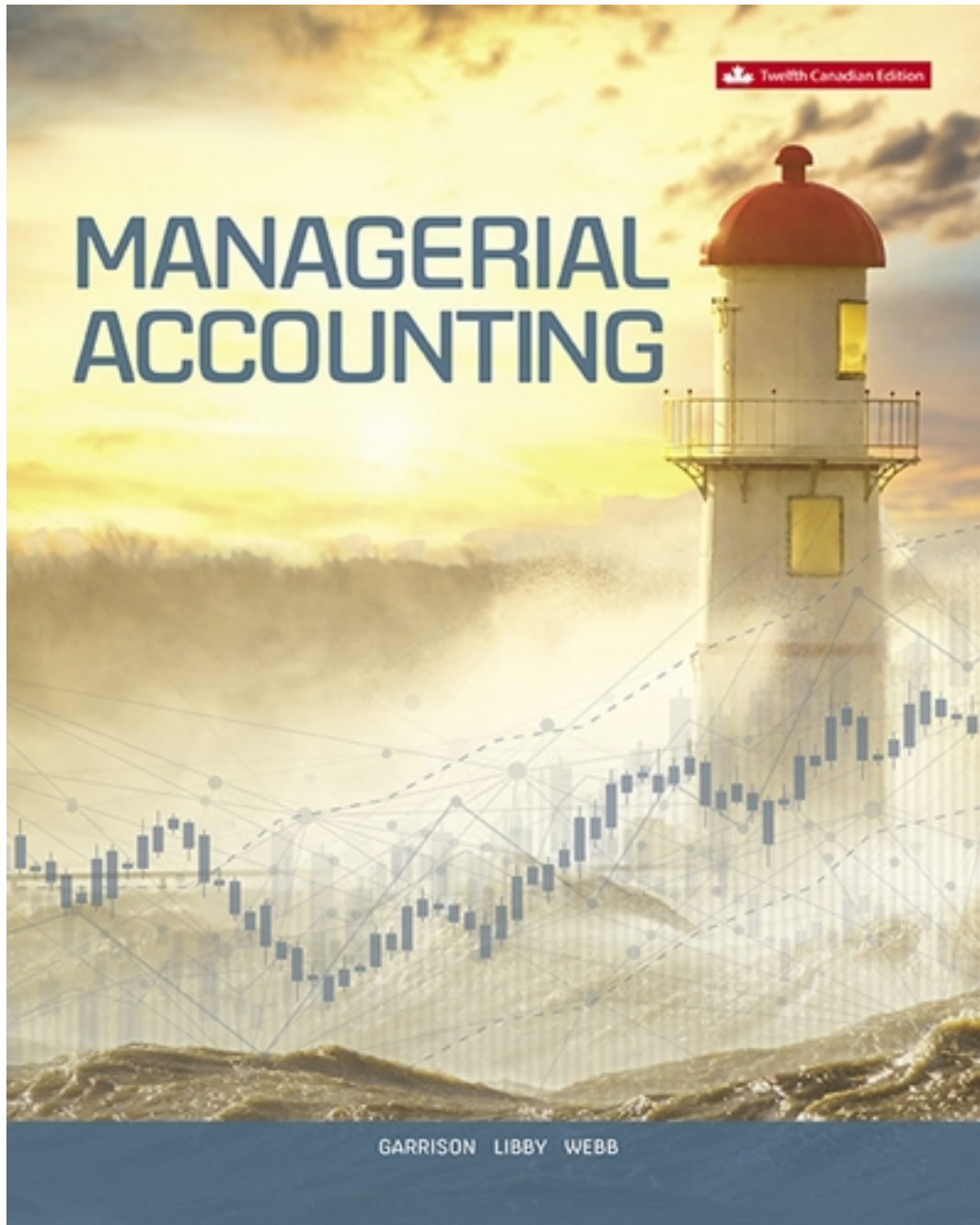


Solutions for Managerial Accounting 12th Edition by Garrison

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Solutions

Chapter 1

Managerial Accounting and the Business Environment

Solution to Discussion Case

Benefits to employees of having a code of conduct:

- Creates clarity as to how *all* employees are expected to behave. This should help employees avoid behaviours that the company prohibits.
- Provides protection for employees when dealing with superiors given the guidelines related to protection from discrimination and harassment.
- Establishes guidelines for workplace safety, which should help protect the health of employees.
- Provides information on the consequences of code violations, which will help employees understand the outcomes of prohibited behaviours, if detected.
- Provides guidance as to what employees should do if they witness a violation of the code and protects those employees who do report an incident.

Disadvantages to CIBC of having a code of conduct:

- May create the impression among employees that they are not trusted by senior management to act appropriately.
- The obligation to report violations could create a culture of suspicion and mistrust among employees.
- Enforcing the code may be costly and time consuming in large organizations such as CIBC. For example, investigations of possible violations could take weeks.
- CIBC may be at a competitive disadvantage versus firms that have a less 'restrictive' code of behaviour.

Solutions to Questions

1-1 Given rapid changes to the competitive environment in many industries, having information on a timely basis to make decisions is critical. For example, getting timely information on customer reactions to product changes, price changes, new marketing campaigns, and so on, is necessary to allow managers to decide if further changes are needed and to make plans for those changes.

1-2 Directing activities involve mobilizing people to carry out plans and run routine operations on a day-to-day basis. Controlling activities involve ensuring that the plan is actually carried out and is appropriately modified as circumstances change. As such, controlling is an 'after the fact' test versus plan.

1-3 A budget is a detailed quantitative plan for the acquisition and use of financial and other resources over a specified future time period.

1-4 Predictive analytics could be used to estimate any number of metrics such as sales volumes, customer returns, customer satisfaction, warranty returns, product defects and so on.

1-5 A performance reports compares actual results to expected or budgeted results and is prepared on a periodic basis (e.g., monthly). Because it allows managers to see if actual results have departed from the plan, it can allow them to take corrective action where necessary. Performance reports can also be used to evaluate the performance of employees or business segments such as product lines. As such, performance reports can be a very important part of the control process in any organization.

1-6 The Royal Bank of Canada could segment its companywide performance by individual customer, by geographic area (e.g., province or country), and by product line (e.g. asset management, personal loans, mortgages, etc.). Procter & Gamble could segment its performance by product category (e.g., beauty and grooming, household care, and health and well-being), product line (e.g., Crest, Tide, and Bounty), and stock keeping units (e.g., Crest Cavity Protection toothpaste, Crest Extra
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Whitening toothpaste, and Crest Sensitivity toothpaste).

1-7 Managerial accounting plays an important role in strategic management by providing information to allow managers to effectively implement strategy and to monitor progress towards achieving strategic objectives. For example, performance measurement systems usually contain metrics related to the organization's target customers (e.g., customer satisfaction) to whom the value proposition is being delivered.

1-8 Planning, controlling, directing and motivating, and decision making must be performed within the context of a company's strategy. For example, if a company that competes as a product leader plans to grow too quickly, it may diminish quality and threaten the company's customer value proposition. A company that competes in terms of operational excellence would select control measures that focus on time-based performance, convenience, and cost. A company that competes in terms of customer intimacy may decide against outsourcing employee training to cut costs because it might diminish the quality of customer service.

1-9 The six business functions that make the value chain are: (1) research and development; (2) product design; (3) manufacturing; (4) marketing; (5) distribution; and (6) customer service.

1-10 Examples of things socially responsible organizations should provide for their employees include: (1) safe and comfortable working conditions; (2) fair compensation; (3) job-training and opportunities for advancement; and (4) non-discriminatory treatment and the right to file grievances;

1-11 Airlines face the risk that large spikes in fuel prices will lower their profitability. Therefore, they need to estimate future fuel prices and create a business plan based on these estimates. Monitoring actual fuel prices as compared to plan may lead to decisions to change

ticket prices, for example. Further, exposure to fuel price spikes may lead to the decision to reduce this risk by spending money on hedging contracts that enable them to lock-in future fuel prices that will not change even if the market price increases.

Steel manufacturers face major risks related to employee safety, so they create and monitor control measures related to occupational safety compliance and performance.

Restaurants face the risk that an economic downturn will reduce customer traffic and lower sales. They reduce this risk by choosing to create menus during economic downturns that offer more low-priced entrees.

provided by someone else (e.g., an employer) and are usually in the form of monetary compensation for work done or goals achieved.

1-12 Having a good ethical reputation is important to companies in maintaining good relations with suppliers, employees and customers. Companies with a poor ethical reputation will likely have trouble finding suppliers for their raw materials, will have difficulty attracting and retaining employees, and will not be attractive to potential customers. Thus, in the long-run having good relations with stakeholder groups is critical to a company's survival.

1-13 Companies prepare a code of conduct to demonstrate their morals and values system, often in part to demonstrate corporate social responsibility. The code of ethics indicates what is expected of all employees and directors in their dealings with various stakeholders.

1- 14 Organizations are managed by people that have their own personal interests, insecurities, beliefs, and data-supported conclusions that ensure unanimous support for a given course of action is the exception rather than the rule. Therefore, managers must possess strong leadership skills if they wish to channel their co-workers' efforts towards achieving organizational goals.

1-15 The company could use emissions metrics and tests to monitor whether pollution (e.g., greenhouse gas emission) is within allowable limits.

1-16 Intrinsic motivation comes from within whereby individuals are motivated to succeed at something because they take personal pride and enjoyment in doing so. Extrinsic incentives are

Exercise 1-1 (20 minutes)

- i. Developing sales estimates of a product for use in the annual budget for a product is a *planning* activity since doing so will establish a goal for sales levels in the coming year.
- ii. The review of the monthly quality control reports is a *controlling* activity aimed at determining whether production processes are operating as planned. Identifying the team members to investigate the problem is a *directing and motivating* activity since it involves assigning tasks to specific individuals. The selection of team members is also a *decision-making activity* since the manager will need to determine which employees are best suited (e.g., which ones have the necessary skills, the time available, etc.) to conduct the investigation.
- iii. Choosing from the two design alternatives for the speakers is a *decision-making activity*. It could also be argued that this is a *planning activity* since it will affect which speaker design the company decides to offer to its customers in future periods.
- iv. Reviewing the monthly performance report is a *controlling* activity. Determining the production schedule in the coming months is both a *planning* and *directing and motivating* activity since it involves the future scheduling of day-to-day activities related to manufacturing the televisions. Evaluating how to motivate retailers to improve sales is also a *directing and motivating* activity and has an element of *planning* as well assuming changes are going to be made to the current incentive system. The evaluation also involves *decision-making* with respect to continuing or discontinuing the OLED television line, and *planning* activities such as setting budgets for future sales of televisions.

Exercise 1-2 (15 minutes)

- i. Primarily financial accounting since it involves the preparation of an income statement for use by the tax authorities (Canada Revenue Agency), an outside body.
- ii. Primarily managerial accounting since it involves the use of information for specific internal purposes related to resource allocations, marketing and production scheduling.
- iii. Primarily financial accounting since the information is being used to develop an account balance (allowance for doubtful accounts) for use in the year-end financial statements.
- iv. Primarily management accounting since the information is being used to evaluate customer satisfaction. Preparing this information is not a financial reporting requirement but it could be useful for internal decision-making purposes regarding pricing of products, product enhancements, etc.
- v. Primarily management accounting since the information will be used to determine possible changes to credit terms offered to major customers. Note that essentially the same information is being used in item iii above but in this case the use is entirely for internal decision-making purposes, not for purposes of preparing the financial statements.

Exercise 1-3 (15 minutes)

<i>Industry</i>	<i>Type of Risk</i>	<i>Control</i>
Light rail transit	A train might have a mechanical failure.	Implement a preventive maintenance program.
Beer and alcohol	Customers may respond negatively to ad campaigns perceived to promote irresponsible drinking.	Use focus groups to gauge reaction to proposed new ads.
Newspaper	Articles may include inaccurate information.	Implement a review process to fact-check article content.
Sports and entertainment	Fake tickets may be used to attempt entry to events.	Implement a barcode system to use on tickets for all events.
Solar energy	A shortage of inventory at a key supplier of components could interrupt production.	Identify more than one supplier for key components.
Software as a service	The company's website might be hacked resulting in unauthorized access to customer data.	Develop firewalls and other security protocols to reduce the threat of hacking.
Motorcycles	A failure of technological enhancements such as traction control could cause injuries to customers.	Develop an intensive testing program for all new enhancements that could have safety implications.

Problem 1-4 (15 minutes)

The type of cognitive bias revealed by this data is called self-enhancement bias. This bias occurs when people overstate their strengths and understate their weaknesses relative to others. This bias may cause managers to be overly-optimistic when making plans for the future. This bias might also cause managers to readily blame others if control data indicates unsatisfactory performance. It can also lead managers to make poor decisions because they believe their managerial prowess can overcome any potential obstacles revealed by an objective data analysis. Managers can help reduce the potential adverse consequences of self-enhancement bias by establishing a “devil’s advocate” team of independent managers that are charged with challenging proposed courses of action.

Problem 1-5 (20 minutes)

Some possible examples for each activity:

Planning activities:

1. Estimating the advertising revenues for a future period.
2. Scheduling the designated broadcast time slot for games, special programming, news shows, etc.
3. Estimating total expenses for future periods including salaries of news desk anchors, play-by-play analysts, researchers, camera crew personnel, etc.

Directing and motivating activities:

1. Scheduling news desk anchors for each day's news broadcasts.
2. Assigning camera crew employees to cover specific events (e.g., games, press conferences, etc.).
3. Reviewing scripts used by news desk anchors for accuracy, clarity, etc.
4. Providing performance incentives for news anchors based on viewership numbers.

Controlling activities:

1. Contrasting the actual number of viewers for each show or game with its viewership projections.
2. Comparing the actual costs of producing a broadcast of a sporting event (e.g., hockey game) to its budget.
3. Comparing the advertising revenues earned from broadcasting a sporting event to the costs incurred to broadcast that event.

Decision-making activities:

1. Determining which news anchor personnel to sign to contracts.
2. Identifying and evaluating a new product line to complement the network's offering, such as a sport popular in foreign markets but not covered in North America.
3. Determining which specific games to broadcast in each sport carried by the network.

Problem 1-6 (20 minutes)

The purpose of this exercise is to present students with an opportunity to debate the ethicality of competing courses of action. Some students may argue that the ethical choice is to tell the truth when speaking with the professor from B.C. University. Other students may argue that it is okay to be untruthful with the professor from B.C. University because it serves a “greater good” from the standpoint of future Central Manitoba University students that will be able to avoid Dr. Smith.

The power of rationalization is a very important topic when discussing ethics and decision-making. When students are asked a generic question about the ethicality of breaking the law or lying, they quickly condemn these actions as unethical. However, when given specific contexts, such as the one presented in this problem, many students will rationalize unlawful or dishonest conduct. It is important to emphasize the long-term survival nature of ethical decision making. A culture of treating stakeholders, which includes other universities in this case, honestly and with integrity will provide the school with both the support of the community but also supports a culture that makes it an organization to which people want to belong.

Problem 1-7 (20 minutes)

1. Companies face numerous potential incentives to engage in greenwashing or overstatement of claims about being socially responsible. For example:
 - Doing so can improve access to investment capital as some investors will only invest in companies that demonstrate good environmental and social performance.
 - Doing so can have a positive impact on the company's ability to attract and retain talent since some individuals will only work for companies with good environmental and social performance.
 - Doing so can bolster sales since some customers will only purchase products or services from companies with good environmental and social performance.

2. Numerous controls could be put in place to increase the likelihood that a company actually engages in environmentally and socially responsible activities such as:
 - Establishing financial incentives for achieving targets related to objective measures of environmental performance (e.g., reduction in water consumption or reduction in electricity usage).
 - Implementing mandatory health and safety training and regularly conducting compliance reviews.
 - Establishing and disclosing non-discriminatory hiring policies and conducting regular reviews for compliance.
 - Conducting periodic reviews of labour practices by suppliers operating in developing countries.
 - Having environmental and social responsibility reports audited, even though doing so is not mandatory.
 - Establishing financial guidelines (e.g., budgets) for financially supporting local charities, schools or municipalities and periodically reviewing actual spending against such guidelines.
 - Establishing an independent management team, responsible directly to the board of directors, charged with assessing the organization's CSR program and performance.

Problem 1-8 (30 minutes)

1. Possible unintended consequences:

- Example 1:
 - The manager could improve profits by reducing discretionary spending on value chain activities such as research and development, employee training or marketing. These actions could help improve profits in the short-term but longer-term may have a negative impact on company performance.
 - The manager could improve profits by reducing manufacturing costs through the use of lower quality materials or by using less-experienced workers. Either of these actions could reduce product quality, which longer-term could negatively impact the company's reputation.
- Example 2:
 - Sales staff could engage in aggressive sales tactics such as pressuring customers to make a purchase, or providing misleading product information, which could reduce the customers' willingness to purchase from the company in the future.
 - Sales staff could offer price discounts too readily in an effort to secure a sale, which would reduce the profit margin on each sale.

2. Controls that could be put in place to reduce the likelihood that the unintended consequences identified in requirement 1 will occur.

- Example 1:
 - Establish non-financial performance measures for key value chain activities such as research and development (e.g., number of new product features), employee training (e.g., number of training hours per employee) and customer service (e.g., customer satisfaction). Hold managers accountable for meeting expected levels of performance on such metrics.

Problem 1-8 continued

- Establish measures for product quality (e.g., number of defects, number of product returns, etc.) and hold managers accountable for meeting expected levels of performance.
- Establish policies for the use of specific suppliers that meet stringent requirements regarding material quality and periodically conduct compliance reviews.
- Change the extrinsic rewards such that they contain a component of long-term performance. An example would be a bonus based on three-year rolling average of profitability rather than rewarding performance for a single year.
- Example 2:
 - Periodically measure customer satisfaction regarding their experience with sales staff. Hold sales staff accountable for unacceptable levels of customer satisfaction.
 - Do not allow sales staff any discretion to offer sales discounts.
 - Establish a mix of fixed pay (e.g., hourly wages) and commissions that results in less incentive to engage in aggressive sales tactics.

Problem 1-9 (30 minutes)

1. Benefits and challenges of performing value chain analysis:

Benefits:

- Provides a complete picture of product profitability since it incorporates all major functions of the value chain involved in developing, manufacturing and servicing products.
- Can lead to the identification of the most and least profitable products. This could result in actions taken to improve less profitable products such as reducing manufacturing costs, increasing advertising or improving customer service.
- Could lead companies to allocate resources to more profitable products (e.g., increased marketing or customer service) to further enhance their performance.
- Could lead to the discontinuation of unprofitable products if management concludes that cost reductions across the value chain are not possible or feasible.

Challenges:

- Some costs may be difficult to separately track for each major product line. For example, marketing costs often relate to advertising campaigns for a company's products as a whole rather than for individual products (e.g., BMW advertisements are often for the brand rather than a specific model).
- The timing of some value chain costs will occur in different periods than the related product revenues. For example, research and development costs will be incurred before a product is brought to market and customer service costs will be incurred after the product has been sold. Therefore to accurately assess product profitability using value chain analysis, managers will have to conduct the analysis on a long-term basis over multiple reporting periods (years) to fully match revenues with the related costs.

Problem 1-9 (continued)

- Could lead managers to reduce costs in certain areas such as customer support that could improve product profitability in the short-run but would have negative consequences longer-term if product quality or customer service levels suffer as a result. Note, a good control system would mitigate this behavior by rewarding managers in part based on the longer-term performance of the company.
- Longer term success depends on having a constant supply of new products to fill the lost sales that eventually occur as older products lose their appeal with consumers. However, analysis will often show that older products are relatively more profitable. Long term success, however, depends on having products at all stages of the product life cycle and therefore care must be taken with decision making based on value chain analysis alone.

2. Change in value chain costs over the life of a product:

- Research and development costs are primarily incurred before a product is brought to market and so will be low or non-existent for more mature products.
- Product design costs will be considerably lower as a product matures but some may continue to be incurred such as design changes aimed at improving quality or functionality.
- Manufacturing costs may decline on a per unit basis for more mature products as a result of improvements to production activities or because higher volumes are produced allowing for greater economies of scale (e.g., lower unit costs for raw materials).
- Marketing costs will likely be higher for new products but decrease as products mature since customers will be aware of their existence and features. Marketing costs could also increase as a product matures in response to increased competition.
- Distribution costs may increase as a product matures as managers seek new markets in which to increase sales.

Chapter 1

Managerial Accounting and the Business Environment

Learning Objectives

- LO1. Describe the functions performed by managers.
- LO2. Identify the major differences and similarities between financial and managerial accounting.
- LO3. Explain the basic concept of enterprise risk management.
- LO4. Explain the nature and importance of ethics for accountants.
- LO5. Explain the elements of corporate social responsibility.
- LO6. Explain how intrinsic motivation, extrinsic incentives, and cognitive biases affect employee behaviour.

Chapter Learning Objectives and the CPA Canada Technical Competencies

LO3, LO5	2.5.1: Designs an effective risk management program and evaluates its impact on shareholder value
LO1, LO2	3.1.1: Evaluates management information requirements
LO3, LO4, LO5, LO6	3.1.2: Documents and assesses business processes, systems and data requirements and recommends improvements to meet information needs

Chapter Overview

This chapter serves **four main purposes**:

- It explains the nature of managerial accounting in providing internal accounting information to support the work of management—planning, directing and motivating, and controlling.
- It describes the nature of organizations and the role of management accountants in an organization.
- It explains how companies are responding to a changing business environment by improving business process with the following the following approach:
 - Enterprise Risk Management
- It discusses the importance of upholding ethical standards.

Service-Related Examples

<i>Company</i>	<i>Type of Business</i>	<i>Text Reference</i>
Chartered Professional Accountants	Accounting	Introduction
Various	Services	Exhibit 1-1
CIBC	Bank	Ethics/Discussion Case

Assignment Topic Grid Chapter 1

<i>Problem</i>	<i>Topic</i>	<i>LO1: Functions of managers</i>	<i>LO2: Financial vs. managerial accounting</i>	<i>LO3: Enterprise risk management</i>	<i>LO4: Nature and importance of ethics for accountants</i>	<i>LO5: Elements of corporate social responsibility</i>	<i>LO6: Intrinsic motivation, extrinsic incentives, and cognitive biases</i>	<i>Service industry</i>	<i>Writing component</i>	<i>CPA adapted</i>
E1-1	Functions Performed by Managers	✓							✗	
E1-2	Financial and Managerial Accounting		✓						✗	
E1-3	Enterprise Risk Management			✓					✗	
P1-4	Cognitive Biases						✓		✗	
P1-5	Planning and Control Activities	✓						😊	✗	
P1-6	Ethics in Business				✓				✗	
P1-7	Corporate Social Responsibility			✓	✓	✓			✗	
P1-8	Extrinsic Incentives			✓			✓		✗	
P1-9	Value Chain Analysis			✓					✗	

Video Links

Comparison of Financial and Managerial Accounting

LO2

“Managerial Accounting 1.1: Managerial vs Financial Accounting” found on YouTube (https://www.youtube.com/watch?v=8gmfuhB5-7g&list=PLbXHqQHS6rSMOe_sLVydylgcr0lCfreE), posted by Professor Kurt Heisinger (3:22 min.)

This video summarizes the seven key differences between managerial and financial accounting.

Discussion Questions

- Why does managerial accounting not need to follow GAAP?
- Explain your answer by emphasizing the major differences between financial and management accounting.

FRS INC.

“Last month’s warehouse fire was a disaster!” exclaimed Paul May, FRS Inc.’s Chief production officer. “We need to fill out the insurance forms as soon as possible to get back all our lost inventories. It seems the fire destroyed our accounting system as well as backup production documentation”, he continued.

John Christensen, the company’s controller walks into Mr. May’s office and shouts “I was able to salvage some of last year’s data. Have a look.”

John’s data contained the following:

Beginning Inventories:

Direct Materials: \$40,000
Finished Goods Inventory: \$48,000
Work-in-Process: \$64,000.

“I also know that our gross profit percentage is 40% and that prime costs are 60% of manufacturing costs” continued John.

“That sounds about right” replies Paul May. “I was also told that overhead costs amount to 40% of conversion costs. Also, I’d say that our ending work-in process inventories were about 20% of the monthly manufacturing costs.”

After further discussions, it was revealed that last year’s sales were \$1,000,000 and that direct labour costs and direct material purchase costs amounted to \$400,000 and \$550,000 respectively.

“John, can you get back to me by tomorrow letting me know how much we can expect to get from our insurance company? I know that they won’t pay for any scrap incurred during the production process, which I estimate to be 10% of production.”

Required:

Assume the role of John Christensen and estimate the amount recoverable in insurance proceeds.

SOLUTION - Case One - FRS INC.

Topics Addressed:

- Cost Flows and the Schedule of Goods Manufactured
- Cost Behavior and Quality Management
- Cost Behavior

Solution:

The easiest way to determine the amount collectible is to create an income statement as follows:

Sales		1,000,000
Less: Cost of Goods Sold:		
Beginning Finished Goods Inventory:	48,000	
Add: Cost of Goods Manufactured:		
Beginning Work-in Process:	64,000	
Direct Materials:		
Opening:	40,000	
Purchased:	550,000	
<u>Less: Ending:*</u>	<u>(90,000)</u>	
Direct Materials Used:	500,000	
Direct Labour	400,000	
Manufactured Overhead	600,000	
Less: Ending Work-in-Process	(300,000)	
Cost of Goods Manufactured:	1,264,000	
Goods Available for Sale:	1,312,000	
Less: Ending Finished Goods:	(712,000)	
Cost of Goods Sold:		600,000
Gross Margin		400,000

The ending inventories that are collectible are:

Direct Materials:	90,000
Work-in-Process:	300,000
Ending Finished Goods:	712,000
Less: Scrap: $(10\% \times 300,000 + 712,000)$	<u>(101,200)</u>
Amount Collectible:	\$1,000,800

With the sales and GM% you get COGS of 600,000

$\text{COGS} = \text{FG opening} + \text{COGM} - \text{FG ending}$

$\text{COGM} = \text{COGS} - \text{FG opening} + \text{FG ending}$

$600,000 - 48,000 + 712,000$

1,264,000

$\text{COGM} = \text{WIP opening} + \text{Manufacturing Cost} - \text{WIP ending}$

$\text{WIP opening} + \text{DM} + \text{DL} + \text{MOH} - \text{WIP ending}$

$1,264,000 = 64,000 + 500,000 + 400,000 + 600,000 - \text{WIP ending}$

$\text{WIP ending} = 1,564,000 - 1,264,000$

300,000

$\text{DM} = \text{RM opening} + \text{Purchases} - \text{RM ending (Ending*)}$

$500,000 = 40,000 + 550,000 - \text{RM ending}$

$\text{RM ending} = 590,000 - 500,000$

= 90,000