Chapter 1

Introduction to Managerial Accounting

ANSWERS TO QUESTIONS

1. The primary difference between financial and managerial accounting is the intended user of the information. Financial accounting is used by external parties such as investors, creditors, and regulators, while managerial accounting is used by internal business managers.

2. Different users will have different information needs, which give rise to many other differences between financial and managerial accounting. Financial accounting includes standardized financial statements that are objective, reliable, and historic in nature. These reports are prepared on a periodic basis and are reported at a highly aggregate level, for the company as a whole. Managerial accounting information is much broader in nature and can encompass budgets, performance evaluations, and cost accounting reports. The information tends to be more subjective and future-oriented in nature and must be relevant to the particular decision the manager is trying to make. The information in these reports tends to be more detailed and segmented, depending on the manager's area of responsibility.

3. GAAP-based financial statements, which are prepared for external parties, will not necessarily be useful for internal managerial decision making. Managers often need more detailed information than is included in historically-oriented financial statements. They may need the information broken down by division, business segment, or product line. In addition, managers are typically more interested in what will happen in the future, as opposed to the past. Even if the information is not as objective and verifiable as what would be included in a financial report (for example, it may include more budgeted or forecasted data), managerial accounting information must be relevant to the particular decision the manager is trying to make.

4. Service companies sell services (non-tangible items) to consumers or other businesses. Merchandising companies sell finished goods that they have purchased from someone else. Manufacturing companies make a product using raw materials, then sell it to another manufacturer, merchandising company, service company, or individual consumer.

5. Examples of service firms include hair salons, travel agents, real estate firms, law firms, dentist's office, restaurants, etc. Merchandising companies include Wal-Mart, GAP, Safeway, Exxon, etc. Manufacturing firms are those that produce a physical product, whether it is golf balls, furniture, clothing, computers, etc. Manufacturing facilities are often located in "industrial" or "light industrial" areas on the outskirts of metropolitan areas.

6. The three functions of management are planning/organizing, directing/leading, and controlling.

7. The three functions of management are interrelated in that one function will affect what happens in the next function, and the entire process provides feedback for future decision making. For example, managers must first know where they are going and what resources they will need to get there (planning/organizing) before they can begin to direct/lead the organization toward successful achievement of the plan. The controlling function provides feedback to managers about whether the plan is being achieved, so that they can take corrective action by adjusting the plan, the resources, or their implementation of the plan.

8. Ethics refers to the standards of conduct for judging right from wrong, honest from dishonest, and fair from unfair. Although some accounting and business issues have clear answers that are either right or wrong, many situations require accountants and managers to weigh the pros and cons of alternatives before making a final decision.

9. Congress enacted SOX in response to a number of high-profile scandals in which companies failed as a result of erroneous and fraudulent reporting. The act was aimed at renewing investor confidence in the external financial reporting system, but also placed additional responsibilities on company managers.

10. The Sarbanes-Oxley Act increased manager's responsibility for creating and maintaining an ethical business and reporting environment. For example, managers must perform an annual review of their company's internal control system and issue a report that indicates whether the controls are effective. This new requirement places more responsibility on all managers (not just accountants) for reporting accuracy. The Act also emphasizes the importance of ethics by requiring public companies to adopt a code of ethics for senior financial officers.

11. The Sarbanes-Oxley Act (see Section 404) attempts to reduce fraudulent reporting in the following ways:
    - Opportunity: SOX attempts to reduce the opportunity for error and fraud by requiring an internal control report from managers, stronger oversight by the board of directors, and requiring external auditors to attest to the effectiveness of the internal controls.
    - Incentives: SOX attempts to counteract the incentive to commit fraud by providing much stiffer penalties to those who intentionally misrepresent a company's financial performance.
    - Character: SOX emphasizes the importance of character in the prevention of fraud by requiring companies to create anonymous tip lines for reporting fraud, providing "whistle-blowers" legal protection, and requiring companies to adopt a code of ethics for senior financial officers.

12. Companies with strong ethical cultures are rewarded with higher productivity, improved team dynamics, lower risks of fraud, streamlined process, improved product quality, and higher customer satisfaction.

13. Answers will vary. The cash transactions could be anything from purchasing lunch to paying rent to paying a speeding ticket. The non-monetary exchanges could include volunteer work, helping a friend move, tutoring another student, etc.

14. Out-of-pocket costs are those that you pay for "out of your pocket", whether in cash or with a credit card. It could be the cost of fuel in your car, or the cost of your lunch. Opportunity costs are the "lost benefits" you incur when you choose to do one thing instead of another. These are typically more difficult to estimate and to quantify. For example, if you rode your bike to school instead of driving, the additional time it took you to ride your bike is an opportunity cost of that decision. But to put a dollar value on it (i.e., quantify it), you would need to know how valuable your time is.

15. Cost information is critical to managerial decision making. For example, managers typically want to know what a product or service costs before they can decide what price they should charge for it. They also need to know how much something costs so they can decide whether to buy it, how much to buy, and what supplier to buy from.

16. A direct cost is one that can be traced to a specific cost object, while an indirect cost is one that either cannot be traced, or it is not worth the effort to trace the cost. Direct costs include the primary material inputs such as leather, cloth, hardware, etc. Direct costs would also include the wages of workers who were directly involved in making the product (e.g. cutting, sewing, etc). Indirect costs are all other costs incurred to make the product such as including indirect material (e.g. thread), rent on the manufacturing facility, supervision, power to run the machines, etc.

17. Variable costs are costs that change, in total, in direct proportion to a change in activity level. Fixed costs remain the same, in total, regardless of activity level. Fuel and maintenance costs will vary in direct proportion to the number of miles you drive your car. Even though you may not pay for the maintenance costs each and every week, the more miles you drive, the more maintenance your car will need. Costs such as insurance and parking are fixed, regardless of the number of miles driven.

18. A relevant cost is one that has the potential to influence a decision; an irrelevant cost will not influence a decision. For a cost to be relevant, it must 1) differ between the decision alternatives and 2) be incurred in the future rather than in the past.

19. Relevant costs are those that will differ between these two alternatives. Examples include the cost of transportation to and from the different locations, difference in lodging costs, the cost of entertainment at each venue, etc. Irrelevant costs are those that will be incurred regardless of which alternative is chosen, such as the cost of rent and utilities at your apartment back home. If the cost of food and entertainment will be roughly the same in either location, this would be considered an irrelevant cost.

20. Direct materials and direct labor are referred to as prime costs. At one point in time direct materials and direct labor were the primary costs of making a product. As manufacturing processes have become more automated, indirect costs such as machine depreciation and factory supervision have become a larger proportion of the cost.

21. Manufacturing overhead includes all manufacturing costs other than direct material and direct labor, or any cost that is associated with manufacturing that is not directly traceable to the product. Examples include rent, supervision, insurance, utilities, and machinery in the manufacturing facility. It does not include non-manufacturing costs such as general and administrative expenses or selling expenses.

22. Prime costs are direct materials + direct labor. Conversion costs are direct labor + manufacturing overhead. You cannot add them together to arrive at total manufacturing cost because direct labor is included in both and would be "double counted."

23. Product costs are initially recorded as inventory on the balance sheet. They are transferred to Cost of Goods Sold on the income statement when the product is sold. Period costs are expensed on the income statement as soon as they are incurred.

24. Product costs are called inventoriable costs because they are initially recorded as inventory and are not expensed until the inventory is sold. These costs are initially recorded in inventory accounts (on the balance sheet) and follow the flow of the product as it makes its way through the production process. Once the product is finally sold, the product costs are transferred to Cost of Goods Sold, where they will be matched against sales revenue on the income statement.

25. According to GAAP, all manufacturing costs must be treated as a product cost, which means the costs will be included in inventory (on the balance sheet) until the product is sold. Once the product is sold, the product costs are transferred to Cost of Goods Sold, where they will be matched against sales revenue on the income statement.

26. Since period costs are expensed in the period they are incurred, they would only appear on a company's income statement and not its balance sheet.

27. Incorrectly classifying advertising as a product cost would overstate product cost which could impact the balance sheet inventory accounts as well as cost of goods sold on the income statement. Since this advertising cost wasn't expensed immediately as it should have been, total expenses on the income statement might also be understated if some of the goods haven't been sold (i.e., some of the cost is still held on the balance sheet as inventory).

Authors' Recommended Solution Time
(Time in minutes)

Mini-exercises		*Exercises*		*Problems*		Cases *and Projects*	
No.	*Time*	*No.*	*Time*	*No.*	*Time*	*No.*	*Time*
1	4	1	5	PA-1	7	1	40
2	5	2	6	PA-2	8	2	40
3	4	3	3	PA-3	6	3	40
4	3	4	4	PA-4	7		
5	6	5	5	PB-1	7		
6	3	6	6	PB-2	8		
7	4	7	5	PB-3	9		
8	5	8	5	PB-4	7		
9	4	9	5				
10	4	10	5				
11	4	11	5				
12	4	12	5				
		13	5				
		14	5				

* Due to the nature of cases, it is very difficult to estimate the amount of time students will need to complete them. As with any open-ended project, it is possible for students to devote a large amount of time to these assignments. While students often benefit from the extra effort, we find that some become frustrated by the perceived difficulty of the task. You can reduce student frustration and anxiety by making your expectations clear, and by offering suggestions (about how to research topics or what companies to select).

ANSWERS TO MINI-EXERCISES

M1--1

B 1. Managerial accounting is future-oriented, while financial accounting is primarily historical in nature.

A 2. Financial accounting is used primarily by external parties.

D 3. Both financial and managerial accounting are relied on for decision making

A 4. Financial accounting is primarily historical in nature, while managerial is future-oriented.

A 5. Financial reports can be obtained from the company website, or requested from the company CFO.

A 6. Financial reports are typically reported in aggregate for the company as a whole.

B 7. Managerial accountants may prepare daily reports, or even real-time reports.

B 8. Managerial accounting is used mostly by managers within the company.

C 9. Both financial and managerial accounting information should be accurate to help with decision making.

D 10. Neither financial reports nor managerial reports are always available on the Internet to any interested party. Annual and quarterly statements of publicly-held companies are available on the SEC website and are usually available on the company's website. It is unusual to find the financial statements of privately-owned companies on the internet.

M1--2

The three basic functions of management are as follows:

1. Planning/organizing is the future-oriented part of the process where managers determine what they want to achieve in the short and long run and identify the resources that will be necessary to achieve the plan. For the production manager, this would include determining how many units will need to be produced during each month of the coming year in order to meet sales projections. Once the production manager knows how many units will be produced during the next year, he/she must organize the work force and make certain employees have the necessary resources (machines, materials, etc) to achieve the plan. If not, he/she may need to hire more people, lease more machines, purchase more material, etc.

2. Directing/leading involve all of the actions that must be taken to implement the plan. As the production manager, you will need to lead and direct your employees as they work towards achieving the plan.

3. Controlling involves comparing actual results to the plan to determine whether corrective action is necessary. For example, you may find that the company is producing more units than are actually being sold, resulting in a build-up of finished goods inventory. If so, you may decide to reduce production during the following month to adjust for this issue.

M1–3

1. C
2. A
3. B
4. C
5. B

M1-4

1. This is an example of an ethical dilemma. The government will be harmed because an insufficient amount of tax revenue will be collected from the client, which will in turn harm the public as well.

2. This is an example of an ethical dilemma. Both of you will be harmed if you are caught, but you will be harmed regardless of whether you are caught because without doing the homework for yourself you lose an opportunity to learn the material.

3. This is an example of an ethical dilemma. The owner(s) of the store will be harmed because of lost revenue, and both you and your manager will likely lose your jobs if you are caught.

M1--5

1. Manufacturing Overhead (MOH)
2. Period cost (P)
3. Direct material (DM)
4. Manufacturing Overhead (MOH)
5. Manufacturing Overhead (MOH)
6. Direct labor (DL)
7. Period (P)
8. Manufacturing Overhead (MOH)
9. Period cost (P)
10. Direct labor (DL)

M1--6

1. Direct Material = $1,500
2. Direct Labor= $2,500 +$1,600 = $4,100
3. Manufacturing Overhead = $1,800 + $2,800 + $250 + $3,500 = $8,350
4. Prime Cost= $1,500 + $4,100 = $5,600
5. Conversion Cost= $4,100 + $8,350 = $12,450
6. Total Current Manufacturing Costs= $1,500 + $4,100 + $8,350 = $13,950
7. Total Non-Manufacturing (Period) Costs= $800 + $600 + $3,000 = $4,400

M1--7

1. Relevant costs of pursuing a graduate degree would include the cost of tuition, books, and fees associated with the program. A major opportunity cost would be the potential salary you could earn if you got a full-time job after graduation rather than continuing to go to school. A relevant benefit is the increased salary that you would be able to earn after completing the degree. Alternatively, this could be considered an opportunity cost of NOT getting the graduate degree.

2. Irrelevant costs are those that will be incurred regardless of whether you decide to go to graduate school, such as rent (assuming you would pay the same amount under either alternative), food, clothing, car insurance, etc. If any of these costs are expected to be higher or lower if you pursue the degree, the increase or decrease would be relevant and should be factored into the decision.

M1--8

	Product Costs				
	Direct Materials	Direct Labor	Manufacturing Overhead	Prime Cost	Conversion Cost
Production supervisor salary			X		X
Cost of lamp shades	X			X	
Wages of person who assembles lamps		X		X	X
Factory rent			X		X
Wages of person who paints lamps		X		X	X
Factory utilities			X		X
Screws used to assemble lamps			X		X

M1--9

Case	Direct Materials	Direct Labor	Manufacturing Overhead	Prime Cost	Conversion Cost
A	$ 900	$1,300	$ 2,000	$ 2,200	$ 3,300
B	400	2,250	1,325	2,650	3,575
C	2,180	700	1,500	2,880	2,200
D	850	750	1,250	1,600	2,000

M1--10

S 1. Merry Maids Man

2. Dell Computer S

3. Brinks Security

Mer 4. Kmart

Mer 5. PetSmart

Man 6. Ford Motor Company

S 7. Bank One

Man 8. Ralph Lauren (also sell merchandise in factory stores)

Mer 9. Dillard's

Mer 10. Sam's Club

M1-11

Solution will vary based on the company chosen. Examples:

Merry Maids

Direct Cost – wages of maids, cost of products used on a specific job
Indirect costs – cost of gas to get to job, depreciation on machinery (e.g., vacuum cleaner), salary of supervisor
Cost object is the individual house, customer, or cleaning job

Brinks Security

Direct costs – cost of security panel installed, cost of warning signs for premises, wages of system installers
Indirect costs -- wages of employees who monitor multiple systems, phone lines in monitoring system, salary of team leaders/managers
Cost object is the customer or location that is being monitored

M1-12

Solution will vary based on the company chosen. Examples:

Petsmart

Direct Cost -- cost of vaccines or medications in vet clinic, cost of any merchandise that the customer purchases (food, collars, books, etc.)
Indirect costs -- depreciation on equipment (cash registers, fish tanks, grooming equipment, shopping carts), store manager salary
Cost object is the individual customer

Sam's Club

Direct costs – cost of photo paper used to print customer's pictures, wages of tire installer
Indirect costs – wages of cashiers, rent or depreciation on building, salary of team leaders and store managers
Cost object is the individual customer

ANSWERS TO EXERCISES

E1--1

Req. 1
Potential questions that would need to be answered include:

- Is there already a product like this on the market?
- Would students be willing to buy such a product?
- What features would the product need to have?
- How much would students be willing to pay for it?
- How much would it cost to make such a product?
- How many units could we sell in the first year? The second year?
- How many units would we need to sell to make a profit?
- What kind of material would we use?
- Where would we manufacture the product? Would we make it ourselves, or buy it from someone else?
- How would we advertise the product to students?
- What type of store would sell the product?
- Is it possible to license the carts with school logos?

Req. 2
Managers would need information from potential customers (students), demographic data, market information (demand), competitor pricing information, information about the cost of material, labor, etc.

Req. 3
Potential consequences include:

- Introducing a product that has no market demand.
- Competitors already have a product that is better than what we have planned.
- Customers are not willing to pay as much as it costs us to make the product.
- We underestimate demand and lose out on potential sales, so customers go elsewhere.

E1--2

The following answers represent the most likely answers. But students should recognize that these functions are interrelated, and so one function may lead to the next. The important thing is that the student be able to provide a rationale for why they chose the particular category they did.

_A_ 1. Identifying five college campuses to serve as test markets.

_A_ 2. Setting the goal of $1,000,000 in annual sales by the year 2015.

_B_ 3. Hiring workers for the manufacturing facility.

_B_ 4. Overseeing the production and shipment of The Campus Cart.

A_ 5. Preparing one-year, three-year, and five-year budgets that detail the necessary resources and costs that will be incurred to meet the projected sales forecast.

__Q_ 6. Deciding which new markets to expand into based on the first year's sales results.

_B_ 7. Implementing a bonus system to reward employees for meeting sales and production goals.

__Q_ 8. Deciding to spend more advertising dollars in regions where sales were slower than expected.

E1--3

For each of the following sustainability initiatives, indicate whether it will impact social (S), environmental (En), or economic (Ee) factors in the triple bottom line. Include more than one factor as appropriate.

S, Ec	1. Implementing a health and wellness program to improve employees' health, reduce stress, improve productivity, and reduce employee turn-over.
En	2. Ensuring that all future construction projects are LEED certified
Ee	3. Implementing a just-in-time inventory system to reduce inventory costs and improve product quality.
En. Ec	4. Providing all employees with glass water bottles to reduce the use of plastic water bottles and the cost of company-sponsored lunches.
En S, Ec	5. Purchasing web conferencing software to give employees the flexibility to work remotely, reduce the number of miles they must commute to work, and save on travel costs for off-site meetings.
S	6. Creating a code of conduct for suppliers to establish guidelines on labor wages, working conditions, health and safety.
Ee	7. Expanding into international markets to increase market share.

E1--4

	Relevant Cost or Benefit	Irrelevant Cost or Benefit	Sunk Cost	Opportunity Cost
$40,000 salary from Shelton	X			X
Anticipated $48,000 salary with an accounting degree	X			X
Tuition and books for years 1-3 of college		X	X	
Cost to relocate to Seattle	X			
Tuition and books for remaining two semesters	X			
$19,000 from your part-time job, which you plan to keep until you graduate	X			X
Cost to rent an apartment in Seattle (assume you are currently living at home with your parents)	X			
Food and entertainment expenses, which are expected to be the same in Seattle as where you currently live		X		
Increased promotional opportunities that will come from having a college degree	X			X

E1--5

	Product Costs					
	Direct Materials	Direct Labor	Manufacturing Overhead	Period Cost	Prime Cost	Conversion Cost
Production supervisor salary			X			X
Cost of fiberglass	X				X	
Wages of assembly person		X			X	X
Sales commission				X		
Cost of high-grade wheels	X				X	
Screws			X			X
Factory rent			X			X
Wages of skateboard painter		X			X	X
Factory utilities			X			X
Utilities for corporate office				X		

E1--6

Req. 1
Direct materials cost= $42,000 (Note: Excludes the cost of thread and buttons. These costs are probably not traced to individuals units, and are included as indirect materials, or manufacturing overhead, in req. 3.)

Req. 2
Direct labor cost= $75,000 + $50,000 = $125,000

Req. 3
Manufacturing overhead = $42,000 + $1,000 + $22,000 + $30,000 + $750 + $15,000 + $6,000 = $116,750

Req. 4
Total current manufacturing costs= $42,000 + $125,000 + $116,750 = $283,750

Req. 5
Prime cost= $42,000 + $125,000 = $167,000

Req. 6
Conversion cost= $125,000 + $116,750 = $241,750

Req. 7
Total period costs= $18,000 + $25,000 + $75,000 = $118,000

E1–7

Case	Prime Cost	Conversion Cost	Direct Materials	Direct Labor	Manufacturing Overhead	Total Manufacturing Cost
A	$3,500	$5,000	$2,000	$1,500	$3,500	$7,000
B	6,600	11,500	2,300	4,300	7,200	13,800
C	4,650	8,000	1,400	3,250	4,750	9,400
D	3,100	5,200	1,000	2,100	3,100	6,200
E	11,500	20,500	3,800	7,700	12,800	24,300

E1--8

Req. 1
Direct Labor = $82,000

Req.2
Manufacturing Overhead = $40,000 + $1,800 + $30,000 + $36,000 + $12,000 + $26,000 = $145,800

Req. 3
Prime Cost= $34,500 + $82,000 = $116,500

Req.4
Conversion Cost= $82,000 + $145,800 = $227,800

Req. 5
Total Manufacturing Costs= $34,500 + $82,000 + $145,800 = $262,300

Req. 6
Period Expenses= $20,000 + $8,000 + $60,000 + $7,500 = $95,500

E1-9

		Product Costs				
	Period Cost	Direct Materials	Direct Labor	Manufacturing Overhead	Prime Cost	Conversion Cost
Company President's salary	x					
Factory rent				x		x
Cost of reflective material		x			x	
Wages of material cutter			x		x	x
Wages of office receptionist	x					
Thread and glue				x		x
Depreciation for salesperson's car	x					
Factory supervisor's salary				x		x
Factory utilities				x		x
Factory insurance				x		x

E1-10

1. Total Product Cost= $800 +$1,100 + $2,800 + $370 + $3,000 + $1,200 + $1,950 = $11,220
2. Prime Cost= $1,100 + $3,000 + 1,950 = $6,050
3. Conversion Cost= $4,950 + $5,170 = $10,120
4. Manufacturing Overhead = $800 + $2,800 + $370 + $1,200 = $5,170
5. Direct Labor= $3,000 + $1,950 = $4,950
6. Total Variable Cost= $1,100 + $370 + $3,000 + $1,200 + $1,950 = $7,620
7. Total Fixed Cost= $800 + $100 + $2,800 + $600 + $2,500 = $6,800

E1-11

Req. 1
The only relevant cost is the cost of the new computer.

Req. 2
All of the "past costs" are irrelevant -- cost of the old computer, cost of the add-on components, and cost of the service agreement for the components.

Req. 3
No, Raymond's logic is not correct. Regardless of whether he chooses to purchase a new computer or not, the money he has already paid out is gone. As things currently stand, Raymond has both a computer and add-on components that he cannot use. At least if he purchases a new computer, the add-on components can be used and perhaps would help Raymond generate additional revenue.

E1-12

Case	Prime Cost	Conversion Cost	Direct Materials	Direct Labor	Manufacturing Overhead	Total Manufacturing Cost
A	$9,400	$16,100	$4,300	$5,100	$11,000	$20,400
B	$19,300	$31,800	$12,000	$7,300	$24,500	$43,800
C	$55,300	$107,500	$43,200	$12,100	$95,400	$150,700
D	$34,650	$47,350	$21,400	$13,250	$34,100	68,750
E	$32,800	$38,000	$17,700	$15,100	$22,900	$55,700

E1-13

Students should recognize that increased automation has led to increased amounts of manufacturing overhead as depreciation and maintenance for factory machinery is added to the manufacturing overhead category. Direct labor could have decreased as a direct result of automation since a machine can often do the work of several laborers. At a minimum, the proportion of labor decreased as total manufacturing overhead increased.

E1-14

Advertising is a non-manufacturing (period expense) that does not affect manufacturing costs, inventory, or Cost of Goods Sold.

Manufacturing Costs:	Unaffected
Inventory:	Unaffected
Cost of Goods Sold:	Unaffected
Period Expenses:	Understated by $72,000
Net Income:	Overstated by $72,000

ANSWERS TO PROBLEMS – SET A

PA1--1

Req.1
Two types of accounting: Financial and managerial.
1) User orientation: The purpose of accounting is to provide useful information to decision makers.
   a) Financial accounting is used by external parties (stockholders, creditors, regulators, SEC, IRS, etc.).
   b) Managerial accounting is used by internal parties (managers).

2) Types of reports:
   a) Financial accounting relies on GAAP-based financial statements (income statement, balance sheet, and statement of cash flows).
   b) Managers need a variety of reports including budgets, cost reports, and performance evaluation reports.

3) Type of information:
   a) Financial accounting tends to be objective, reliable, and historical.
   b) Managerial accounting tends to be subjective, relevant, and future-oriented.

4) Frequency of reporting:
   a) Financial reports are prepared periodically (monthly, quarterly, or annually).
   b) Managerial reports are prepared "as needed", perhaps daily or real-time.

5) Level of analysis:
   a) Financial accounting is reported for the company as a whole.
   b) Managerial accounting reports are prepared based on the manager's area of decision making responsibility (e.g., by product line, by region, by department, etc.).

Req.2
Students should be able to list at least five questions that may be asked during the presentation, along with the answer.

PA1--2

There are three basic functions of management. The three functions are interrelated, and some questions included in one phase may relate to another.

1) Planning/Organizing (setting short and long-term objectives, and identifying the resources needed to achieve them)

Examples of questions Suzie must address in the planning/organizing stage include:

- What outdoor educational products are currently on the market and how does my product compare to those products?
- How much would consumers be willing to pay for my product?
- How much cash will I need to launch my business?
- Will I borrow the money from the bank or invest my own savings?
- How many people will I need to hire?
- How much will I have to pay them?
- How many units do I think I can sell the first year and the second year?
- How much will it cost to produce the product?
- How many units will I have to sell to break even? How long will it take?
- How will I get the product into the hands of my customers?
- How much do I need to spend on marketing?

2) Directing/Leading (taking action to implement the plan)

Examples of questions Suzie must address in the directing/leading stage include:

- Will I supervise the production process myself, or hire someone else to do it?
- How much responsibility will I be able to delegate to my employees?
- How do I motivate my employees to work hard to meet production and sales goals?
- How do I deal with customer complaints?
- Should I fire an employee who is always late for work?

3) Controlling (making adjustments to the plan based on actual results)

Examples of questions Suzie might have to address in the controlling stage include:

- What happens if sales are much lower than I expected?
- What happens if I run out of cash during the first year?
- What happens if the cost of raw materials increases significantly?
- What happens if demand for my product is much higher than I expected and I can't fill all of the customer orders?

PA1--3

Req. 1

You should take the position that an *independent* annual audit of the financial statements is an absolute must. This is the best way to ensure that the financial statements are complete, are free from bias, and conform with GAAP. You should be prepared to reject the partner's uncle as the auditor because there is no evidence about his competence as an accountant or auditor. Also, he does not appear independent because he is related to the partner who prepares the financial statements, resulting in a potential conflict of interest. Hire an independent CPA.

Req.2

You should recommend the selection of an independent CPA in public practice because the financial statements should be audited by a competent and independent professional who must follow prescribed accounting and auditing standards on a strictly independent basis. An audit by an uncle would not meet these requirements.

PA1--4

Req. 1

Factory rent	$3,200	Product	MOH
Company advertising	1,000	Period	
Wages paid to assembly workers	30,000	Product	DL
Depreciation for salespersons' vehicles	2,000	Period	
Screws*	500	Product	MOH
Utilities for factory	900	Product	MOH
Assembly supervisor salary	3,500	Product	MOH
Sandpaper*	150	Product	MOH
President's salary	6,000	Period	
Plastic tubing	4,200	Product	DM
Paint*	250	Product	MOH
Sales commissions	1,200	Period	
Factory insurance	1,000	Product	MOH
Depreciation on cutting machines	2,000	Product	MOH
Wages paid to painters	7,500	Product	DL

*Assumes that screws, sandpaper, and paint are not worth the effort to trace to specific units and are treated as manufacturing overhead.

Req. 2.

a) Direct Materials= $4,200
b) Direct Labor= $30,000 + $7,500 = $37,500
c) Manufacturing Overhead = $3,200 + $500 + $900 + $3,500 + $150 + $250 + $1,000 + $2,000 = $11,500
d) Prime Cost = Direct Material + Direct Labor = $4,200 + 37,500 = $41,700
e) Conversion Cost= Direct Labor+ Manufacturing Overhead = $37,500 + $11,500 = $49,000
f) Total Product Cost= Direct Materials+ Direct Labor+ Manufacturing Overhead = $4,200 + $37,500 + $11,500 = $53,200

Req.3

According to GAAP, product costs must be counted as inventory (raw materials, work in process, or finished goods) until the product is sold. Period expenses are expensed immediately and are never included in inventory. If the period costs were mistakenly classified as product costs AND Jiffy had significant amounts of inventory in the form of raw materials, work in process, or finished goods, then Jiffy's inventory (assets) would be overstated on the balance sheet, while operating expenses would be understated on the income statement.

ANSWERS TO PROBLEMS – SET B

PB1--1

Req. 1
According to GAAP (financial reporting rules), all manufacturing costs must be treated as product costs and included in inventory until the product is sold. Non-manufacturing costs must be expensed immediately.

1) Product cost: All manufacturing related costs:
   a) Three types of manufacturing costs:
      i) Direct material: The major costs of materials that can be traced to the end product.
      ii) Direct labor: The "hands on" labor that can be traced to the end product.
      iii) Manufacturing overhead: All other costs incurred to manufacture the product besides direct material and direct labor.
   b) These costs flow through the following inventory accounts:
      i) Raw materials inventory: for materials purchased but not yet used in production.
      ii) Work in Process inventory: includes all manufacturing costs that have been incurred on units that are not yet complete.
      iii) Finished goods inventory: includes the total manufacturing costs of units that are completed, but not yet sold.
   c) Product costs will appear on the balance sheet as inventory (an asset) until the product is sold, at which point they will be reported on the income statement as Cost of Goods Sold.
2) Period costs: All non-manufacturing related costs.
   a) Generally classified as two types:
      i) General and administrative expenses (e.g., corporate expenses).
      ii) Selling and distribution expenses (e.g., sales commissions, advertising, or shipping costs).
   b) These costs are expensed immediately and are never included on the balance sheet. They are immediately deducted as operating expenses on the income statement.

Req. 2
Students should be able to list at least five questions that may be asked during the presentation, along with the answer.

PB1--2

There are three basic functions of management. The three functions are interrelated, and some questions included in one phase may relate to another.

1) Planning (setting short and long-term objectives and identifying the resources needed to achieve them)
   Examples of questions Maria must address in the planning/organizing stage include:
   - Are there similar products on the market?
   - How does my product compare to those products?
   - How much would consumers be willing to pay for my product?
   - How much cash will I need to launch my business?
   - Will I borrow the money from the bank or invest my own savings?
   - How many people will I need to hire?
   - How much will I have to pay them?
   - How many units do I think I can sell the first year and the second year?
   - How much will it cost to produce the product?
   - How many units will I have to sell to break even? How long will it take?
   - How many units will I need to sell if I want to be making $200,000 in profit by year3?
   - Will I try to manufacture the product myself, or hire another company to do it for me?
   - How will a price increase/decrease affect sales and profitability?
   - How will I get the product into the hands of my customers?
   - How much do I need to spend on marketing?

2) Directing/Leading (taking action to implement the plan)
   Examples of questions Maria must address in the directing/leading stage include:
   - Will I supervise the production process myself, or hire someone else to do it?
   - How much responsibility will I be able to delegate to my employees?
   - How do I motivate my employees to work hard to meet production and sales goals?
   - How do I deal with customer complaints?
   - Should I fire an employee who is always late for work?

3) Controlling (making adjustments to the plan based on actual results)
   Examples of questions Maria might have to address in the controlling stage include:
   - What happens if sales are much lower than I expected?
   - What happens if I run out of cash during the first year?
   - What happens if the cost of raw materials increases significantly?
   - What happens if demand for my product is much higher than I expected and I can't fill all of the customer orders?

PB1-3

Req. 1

Unapproved refunds and voids can be used by dishonest cashiers to eliminate valid sales that have been made and paid for by customers. By eliminating the sales revenue, cashiers can then take the cash given by the customer without anyone knowing it. While the register-monitoring control does not completely prevent this from happening, it does make it possible to detect it on a timely basis. Today, most cash registers require cashiers to enter an employee identification number, so unusual "refund or void" activities can be linked to a particular employee, who can be questioned and/or monitored more closely.

Req. 2

The parties most directly affected by inventory theft in this case are Famous Footwear's (1) managers and (2) employees, and Brown Shoe's (3) investors, (4) creditors, and (5) customers.

Managers are likely to be paid, in part, based on the financial performance of each store. If inventory is being taken without full payment for the sale, the store's gross profit (and net income) will be lower than it should be. This will adversely affect the managers' pay.

Obviously, any dishonest employees who are detected will be harmed (fired, sued, jailed) by having committed the theft. Beyond them, though, other store employees will be harmed, particularly if the company's head office has to close stores whose profits are significantly reduced as a result of inventory theft by dishonest employees.

Because Brown Shoe Company ultimately "owns" the profits of Famous Footwear, any theft by employees at Famous Footwear will adversely affect the financial results of Brown Shoe Company. Poor financial results could harm investors whose ownership share in Brown's stock will likely fall in value. Similarly, poor financial results could cause Brown Shoe Company to violate loan covenants, which could lead to renegotiation of the company's loans on less favorable terms, causing further reductions in the company's income and stock price.

Brown's creditors could be adversely affected if financial losses delay the company's ability to repay its liabilities on a timely basis or, in the extreme case, prevent the company from repaying its liabilities at all.

Loyal customers could be adversely affected if the theft leads the company to increase its selling prices in efforts to generate greater revenues to offset the costs of inventory theft and remain sufficiently profitable.

PB1-4

Req. 1

Factory rent	$2,000	Product	MOH
Company advertising	500	Period	
Wages paid to assembly workers	25,000	Product	DL
Depreciation for salespersons' vehicles	1,000	Period	
Screws*	250	Product	MOH
Utilities for factory	800	Product	MOH
Production supervisors' salary	4,000	Product	MOH
Sandpaper*	150	Product	MOH
President's salary	6,000	Period	
Sheet metal	7,500	Product	DM
Paint*	750	Product	MOH
Sales commissions	1,700	Period	
Factory insurance	2,000	Product	MOH
Depreciation on factory machinery	5,000	Product	MOH
Wages paid to painters	5,500	Product	DL

*Assumes that screws, sandpaper, and paint are not worth the effort to trace to specific units and are treated as manufacturing overhead.

Req. 2

a) Direct Materials = $7,500
b) Direct Labor = $25,000 + $5,500 = $30,500
c) Manufacturing Overhead = $2,000 + $250 + $800 + $4,000 + $150 + $750 + $2,000 + $5,000 = $14,950
d) Prime Cost = Direct Materials + Direct Labor = $7,500 + $30,500 = $38,000
e) Conversion Cost = Direct Labor + Manufacturing Overhead = $30,500 + $14,950 = $45,450
f) Total Product Cost = $7,500 + $30,500 + $14,950 = $52,950

Req. 3

According to GAAP, all manufacturing related cost must be treated as a product cost, while non-manufacturing costs are treated as a period expense. Thus, the depreciation on factory equipment is counted as manufacturing overhead, while the depreciation on the sales persons' vehicles is treated as a period expense. For financial reporting purposes, all product costs are initially counted as inventory (raw materials, work in process, or finished goods) on the balance sheet. Once the product is sold, these costs are transferred to Cost of Goods Sold on the income statement. The period expenses are never reported as part of inventory, but rather are expensed on the income statement during the period incurred.

ANSWERS TO SKILLS DEVELOPMENT CASES

S1--1

The solution to this case will depend on the particular item that the student chooses to investigate. The primary purpose of this case is to get students to think more concretely about what is involved in manufacturing a product. Since most students at this level will have very limited work experience, and may never have been inside a manufacturing facility, this exercise will help make the definitions in the chapter more concrete. Tying it to an everyday item that they use will also allow them to visualize the end product and the different types of costs that go into making that product.

$1--2

The solution to this problem will depend on the company the student chooses to examine, but some common expectations are shown below:

1. Describing the physical changes is intended to get the student to think concretely about how automation will affect the company's processes. For example, what type of machinery will be used, and how will it change other processes, such as the flow of the product or the type of work that will be performed.
2. Negative morale issues are likely to be encountered initially as some employees may be "replaced" with automation. In the long run, however, automation could enhance employee morale as it may allow employees to do different kinds of work that requires more skill, training, and motivation, which may also lead to lower employee turnover and higher morale.
3. In general, automation is likely to increase the skill level of the organization. It won't necessarily lead to reduced labor costs overall, but will likely change the type of labor (from unskilled to skilled). This would result in a shift from direct labor cost (wages) to indirect labor costs (manufacturing overhead or administrative overhead).
4. Automation can either increase or decrease the quality of the end product, depending on the type of product or service the student selected. An automated process is likely to be more consistent than a manual process. But with automation you may lose some advantages of the human touch. For example, most would argue that a manual car wash is superior to a machine wash .... but the machine is likely to do things the same way, every time, which may lead to higher quality overall. The efficiency issue can also swing either way. Machines can often do things more quickly than humans, which can lead to increased efficiency. However, efficiency is a function of both inputs and output, and automation requires a significant up-front investment that cannot be reduced as easily as direct labor. This may mean that machines are idle, which will result in reduced efficiency.

5. Automation will likely affect all of the manufacturing costs. Different types of material inputs may be required in an automated process versus a manual process (again, think of a manual car wash vs. an automatic one; they will require different types of detergents, etc). Generally speaking, automation will cause a shift from direct "hands-on" labor to indirect labor, such as supervision, maintenance, engineers, etc. These indirect labor costs are counted as overhead rather than direct labor. Finally, the cost of the machinery and equipment is likely to significantly increase the overhead costs.
6. Automation usually results in a shift from variable costs to fixed costs. Instead of hiring direct labor, which will vary directly with production needs, automation requires a significant up-front investment that will be incurred regardless of future production activity (i.e. fixed costs).
7. Automation may either increase or decrease the price you pay for the product, depending on whether it increases or decreases the quality of the product, the cost structure of the company, and the efficiency of the production process. In general, one would expect that automation will decrease the cost of the final product and that some of this savings would be passed on to end customers.
8. Again, this will depend on a variety of factors, many of which are discussed above. Perhaps most important is whether the demand for the product is sufficient to compensate for the increased "fixed" cost of automation. If the demand is not high enough, the company may have been better off with a manual process, which may have lower fixed costs, but higher variable costs.

S1--3

1. Students should be able to find many examples of service, merchandising, or manufacturing firms. They should use the description of the company to support their categorization of the firms as primarily service, merchandising, or manufacturing in nature. However, students may find that the distinction is not quite as clear cut as the textbook makes it appear. Many service companies will provide products for resale. Manufacturing firms often have merchandising outlets as well. Almost all companies must excel in customer service in order to be successful.

2. In terms of the financial statements, students should be looking to cost of goods sold or cost of sales on the income statement, and the inventory accounts on the balance sheet, to differentiate between service, merchandising, and manufacturing companies.

CHAPTER 1
INTRODUCTION TO MANAGERIAL ACCOUNTING

Student Learnina Objectives and Related Assianment Materials

Student Learning Objectives	*Mini Exercises*	*Exercises*	*Problems*	*Cases and Projects*
1. Describe the key differences between financial accounting and managerial accounting.	1	1	Al	1, 2, 3, 4
2. Describe how managerial accounting is used in different types of organizations to support the key functions of management.	2, 10	2	A2 B2	1, 2, 3, 4
3. Describe the role of ethics in managerial decision making, the Sarbanes-Oxley Act, and sustainability accounting.	3,4	3	A3 B3	1, 2, 4
4. Define and give examples of different types of cost.	5, 6, 7, 8, 9, 11, 12	4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14	A4 Bl, B4	1, 2

PowerPoint Slides

Student Learning Objectives	*PowerPoint@ Slides*
1. Describe the key differences between financial accounting and managerial accounting.	1-4
2. Describe how managerial accounting is used in different types of organizations to support the key functions of management.	5-7
3. Describe the role of ethics in managerial decision making and the effects of the Sarbanes-Oxley Act and sustainability accounting.	8-12
4. Define and give examples of different types of cost.	13-28

Chapter Summary

LO1-1 - Describe the key differences between financial accounting and managerial accounting.

- Financial accounting information is used by external stakeholders, such as investors, creditors, and bankers.
- Managerial accounting information is used by managers inside the organization.
- Other differences:
  - o Financial accounting information tends to be reliable, objective, and historical in nature.
  - o Managerial accounting information tends to be relevant, timely, and future oriented.
  - o Financial accounting is reported through the income statement, balance sheet, and cash flow statement.
  - o Managerial accounting relies on a variety of reports targeted at specific decisions, including budgets, cost reports, and performance evaluations.
  - o Financial accounting reports are prepared on a monthly, quarterly, or annual basis.
  - o Managerial accounting reports are prepared as needed.
  - o Financial accounting reports are prepared at the company level.
  - o Managerial accounting reports are prepared at the divisional or departmental level appropriate to the decision being made.

LO1-2– Describe how managerial accounting is used in different types of organizations to support the key functions of management.

- Managerial accounting is used in all types of organizations, including manufacturing, merchandising and service firms.
- Although managerial accounting often focused on manufacturing firms, it is becoming increasingly important for service and merchandisers, which are gaining importance in today's economy. It is also useful for non-profit organizations such as universities, charities, and hospitals.
- Regardless of the type of organization, all managers perform the same basic functions:
  - o Planning, or setting long-term objectives along with the short-term tactics needed to achieve them.
  - o Implementing, or putting the plan into action.
  - o Controlling, or monitoring actual results against the plan and making any necessary adjustments.

LO1-3 - Describe the role of ethics in managerial decision making, the Sarbanes-Oxley Act, and sustainability accounting.

- Ethics refers to the standards for judging right from wrong, honest from dishonest, and fair from unfair. Managers confront ethical dilemmas that do not have clear cut answers. They must apply their own personal judgment and values to weigh the pros and cons of alternative courses of action.
- The Sarbanes-Oxley Act of 2002 increases managers' responsibility for creating and maintaining an ethical business and reporting environment. It attempted to reduce fraudulent reporting in three key ways:
  - o Opportunity: SOX requires managers to issue a report that indicates whether the company's internal controls are effective at preventing fraud and inaccurate reporting. The act also places increased responsibility on the Board of Directors, audit committee, and external auditor.

- Incentives: SOX imposed stiffer penalties, including jail time and monetary fines, for those who commit fraud.
- Character: SOX emphasizes the importance of individual character in preventing fraudulent reporting and requires public companies to implement anonymous tip-lines, whistle-blowing protection, and codes of ethics.
- Sustainability is an emerging field that allows organizations to achieve economic results while fulfilling their obligations to society and protecting the environment for future generations. The triple bottom line measures a company's performance towards its sustainability goals by including measures of economic success (profit), social impact (people), and environmental impact (planet).

LO1-4 - Define and give examples of different types of costs.

- Costs can be classified in a variety of ways, depending on how the information will be used:
  - **Out-of-pocket** costs require a cash outlay.
  - **Opportunity** costs are the benefits you give up when you choose one alternative over another.
  - **Direct** costs can be directly and conveniently traced to a specific cost object.
  - **Indirect** costs either cannot be traced to a specific cost object or are not worth the effort of tracing.
  - **Variable** costs change, in total, in direct proportion to changes in activity.
  - **Fixed** costs remain the same, in total, regardless of activity.
  - **Manufacturing** costs are associated with making a physical product. They can be classified as direct materials, direct labor, or manufacturing overhead.
  - **Nonmanufacturing** costs are associated with selling a product or service or running the overall business.
  - GAAP requires manufacturing costs to be treated as product costs and nonmanufacturing costs to be treated as period costs.
  - **Product** costs are assigned to a product as it is being produced; they accumulate in inventory accounts until the product is sold.
  - **Period** costs are reported as expenses as they are incurred.
  - **Relevant** costs are future oriented costs that differ among decision alternatives.
  - **Irrelevant** costs are those that remain the same regardless of the alternatives and thus will not affect the decision.

Chapter Outline	Teaching Notes
I. Role of Managerial Accounting in Organizations A. Decision-Making Orientation 1. The primary goal of accounting is to provide information for decision making. 2. The major difference between financial accounting and managerial accounting is the intended user of the information. a. **Financial accounting** information is used by external parties, such as investors, creditors, and regulators. b. **Managerial accounting** information is used by internal business owners and managers, and employees.	**Exhibit 1.1** Financial accounting is for **external** users. Managerial accounting is for **internal** users.
LO 1-1- Describe the key differences between financial accounting and managerial accounting. B. Comparison of Financial and Managerial Accounting 1. Financial accounting information a. Used by external parties, such as investors, creditors, and regulators. b. Classified financial statements prepared according to GAAP. c. Objective, reliable, historical. d. Prepared periodically (monthly, quarterly, annually). e. Information reported for the company as a whole. 2. Managerial Accounting Information a. Used by internal parties, such as managers and employees. b. Various Non-GAAP reports, such as budgets, performance evaluations, and cost reports. c. Subjective, relevant, future oriented. d. Prepared as needed, perhaps day-to-day or even in real time. e. Information reported at the decision making level (by product, region, customer, or other business segment).	**Handout 1-1** *(see Supplemental Enrichment Activities in this IM)*
LO 1-2- Describe how managerial accounting is used in different types of organizations to support the key functions of management. C. Functions of Management 1. Regardless of the type and size of the organization they manage, all managers perform the same basic functions as follows. a. **Planning** involves setting short-term and long-term goals, along with the tactics that will be used to achieve those goals. b. **Implementing** involves putting the plan into action and motivating others to work toward the plan's success. c. **Controlling** involves comparing actual results to planned	**Exhibit 1.2**

results to see if objectives are being met.

2. The manager of California Pizza Kitchen performs the following basic functions to introduce a new low calorie pizza.
   a. The **planning** stage lays out what managers hope to achieve by introducing the new product. Managers should state the plan in terms of specific and measurable objectives and then identify the tactics to use for achieving the objectives. A key part of this process is the development of a **budget.**
   b. **Implementing** occurs when managers actually begin to execute the plan. Managers must make all of the detailed actions to implement the plan, including buying raw materials, hiring workers, and purchasing new equipment.
   c. **Controlling** involves measuring and monitoring actual results to see whether the objectives set in the planning stage are being met.

Handout 1-2

Exhibit 1.3

Examples:
~~State~~ specific and measurable objectives such as sales volume, market share, or profitability.

Hire workers, purchase assets, buy new raw materials

Compare actual results to plan

D. Types of Organizations
1. There are three types of business organizations based on the type of goods or services offered:
   a. **Manufacturing firms** purchase raw materials from suppliers and use them to create a finished product.
   b. **Merchandising companies** sell the goods that manufacturers produce.
   c. **Service firms** provide a service to customers or clients.
2. Historically, managerial accounting focuses heavily on manufacturing firms. In today's economy, nonmanufacturing firms are becoming increasingly important. Therefore, managerial accounting must meet the needs of both manufacturing and nonmanufacturing firms.

Examples:
~~Ford trucks~~, Apple

Target, Best Buy

Lawn service, accountants

LO 1-3-- Describe the role of ethics in managerial decision making, the Sarbanes-Oxley Act, and sustainability accounting.

E. Ethics and the Sarbanes-Oxley Act

Ethics refers to the standards of conduct for judging right from wrong, honest from dishonest, and fair from unfair.
1. Although some accounting and business issues have clear answers that are either right or wrong, many situations require accountants and managers to weigh the pros and cons of alternative before making decision.
2. The reputation of business managers and accountants has been tarnished in recent years due to high-profile scandals such as at

Enron and WorldCom. 3. Congress enacted the Sarbanes-Oxley Act of 2002 which was primarily aimed at renewing investor confidence in external financial reporting. 4. The Sarbanes-Oxley Act focuses on three factors that affect the accounting reporting environment: opportunity, incentive, and character. 5. SOX attempts to reduce the opportunity for error and fraud. a. Management must conduct a review of the company's internal control system and issue a report that indicates whether the controls are effective at preventing errors and fraud. b. SOX places additional responsibility on the board of directors and external auditors to reduce the opportunity for errors and fraud.	Examples: Mandatory internal control reviews
6. SOX attempts to counteract the incentive to commit fraud by providing much stiffer penalties in terms of monetary fines and jail time. 7. SOX emphasizes the importance of the character of managers and employees by introducing new rules that should help employees of good character make a right decision. a. Audit committees are now required to provide tip lines that allow employees to secretly submit concerns regarding suspicious accounting or audit practices. SOX also provides these "whistle blowers" legal protection from retaliation. b. Companies must adopt a code of ethics for senior financial officers.	Must repay money obtained through fraud Whistle-blower protection; ethics hotlines; codes of conduct
F. Sustainability Accounting **Sustainability accounting** is an emerging area of accounting that is aimed at providing managers with a broader set of information to meet the needs of multiple stakeholders, with the goal of ensuring the company's long-term survival in an uncertain and resource-constrained world. 1. Society, economy and the environment are the three pillars of sustainability. They are called the triple bottom line and are often represented by 3 Ps: People, Profit, and Planet. 2. Many organizations are building sustainable business practices into their business strategies and including sustainability accounting methods into their performance management systems.	**Spotlight on Ethics** Accounting Scandals
II. The Role of Cost in Managerial Accounting	

LO 1-4-- Define and give examples of different types of cost.

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A. The goal of managerial accounting is to help managers make decisions as they perform the functions of planning, organizing, leading/directing, and controlling.

1. Much of the information that managers need to make decisions is based on cost data.
2. The first half of the text will focus on how to develop and utilize meaningful cost data.
3. It is important that we treat costs differently, depending on how the information will be used.

B. Definition of Cost

Cost is the value of what is given up during an exchange. When you incur a cost, you give up one thing, such as money or time, in exchange for something else.

1. Out-of-Pocket versus Opportunity Costs
   a. **Out-of-Pocket Cost** involves an actual outlay of cash. For example, these are costs you pay out of your pocket for things such as food, clothing and entertainment.
   b. **Opportunity Cost** is the cost of not doing something. For example, if you are going to school full-time, you are giving up the opportunity to earn money by working full-time. It is the foregone benefit of the path not taken.
2. Direct versus Indirect Costs
   a. The specific item for which managers are trying to determine the cost is the **cost object.**
   b. Costs that can be traced to a specific cost object are **direct costs.**
   c. Costs that cannot be directly traced to a specific cost object, or that are not worth the effort of tracing, are **indirect costs.**
3. Variable versus Fixed Costs
   a. For internal decision making, managers are sometimes interested in how costs will change if something else changes, such as the number of units produced or the number of customers served.
   b. **Variable costs** are those that change, in total, in direct proportion to changes in activity levels. Although direct costs vary in direct proportion to change in activity, per unit or average variable costs remain the same.
   c. **Fixed costs** are those that stay the same, in total, regardless of activity level, at least within some range of activity.

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*Urge students to complete the **Self-Study Practice** for LO3.*

Examples:
Paying for food

Wages lost when attending school instead of working

Exhibit 1.4

Examples:
Cotton used in shirt,
Wages of workers

Property tax on factory
Salary of security guard

Handout 1-3
Ensure that students can read/understand the graphs for total and fixed costs

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Although total costs remain the same, unit fixed costs vary inversely with the number of units produced.	Examples: The cost of ingredients, in total, increases with the number of pizzas made. The cost per pizza stays the same.
4. Manufacturing versus Nonmanufacturing Costs a. **Manufacturing Costs** include all costs incurred to produce the physical product. They are generally classified into one of three categories. • **Direct materials** are the major material inputs that can be directly and conveniently traced to the final product. • **Direct labor** is the "hands on" labor that can be directly and conveniently traced to the product. • **Manufacturing overhead** includes all manufacturing costs **other than direct materials and direct labor**.	Rent or property taxes for California Pizza Kitchen Examples: Major ingredients for pizza (cheese, dough, sauce)
b. Direct materials and direct labor are call **prime costs** because they used to represent the primary costs of manufacturing a product.	Labor for making pizza.
c. Direct labor and manufacturing overhead are called **conversion costs** because they are required to convert direct materials into a finished product.	Store rent, insurance, utilities, supervision
d. **Nonmanufacturing costs** are the costs associated with running the business and selling the product as opposed to manufacturing the product. They are generally classified into one of two groups. • **Marketing or selling costs** are incurred to get the final product to the customer. • **Administrative costs are** associated with running the overall organization.	
5. Product versus Period Costs a. Whether a cost is product or period determines how and when it will be matched against revenue on the income statement	Examples: Advertising, sales salaries
b. For external reporting, GAAP requires that all manufacturing costs be treated as **product costs**. Product costs are also called **inventoriable costs** because they are counted as inventory (an asset) until the product is sold.	Human resources, IT, accounting
c. In contrast, **period costs** are never counted as inventory but are expensed during the period they are incurred.	**Exhibit 1.5**
d. Product costs follow the flow of the physical product as it moves through the manufacturing process. • As the product is being manufactured, the manufacturing costs are recorded as Work in	**Handout 1-4**

Process Inventory, which is counted as an asset on the balance sheet. • Once the product is completed (but not sold), the manufacturing costs are transferred out of Work in Process Inventory and into Finished Goods Inventory. • They will remain on the balance sheet until the product is sold, at which point they will be recorded as Cost of Goods Sold. e. Nonmanufacturing costs do not relate specifically to the product that is being manufactured, and so they are expensed during the period incurred.	
6. Relevant versus Irrelevant Costs a. For information to be useful, it must be relevant to a particular decision. b. A **relevant cost** is one that has the potential to influence a decision. c. An **irrelevant cost** is one that will not influence a decision. d. For a cost to be relevant, it must meet both of the following two criteria: • It must differ between the decision alternatives. • It must occur in the future rather than in the past. e. Costs that differ between the decision alternatives are called **differential costs.** f. The second criterion, that costs must occur in the future, eliminates costs that have already been incurred or **sunk costs.** It is often difficult for managers to ignore what happened in the past and focus only on the future.	**Exhibit 1.6** Examples: Keep the old car or buy a new one? Relevant costs are the price you pay for buying a new car, and any difference in fuel costs between the new car and the old one. Irrelevant costs include the price you paid for the old one. ***Urge students to complete the Self-Study Practice for LO4, study the terms in the chapter, and complete the Demonstration Case at the end of the chapter.***

Supplemental Enrichment Activities

Note: These activities would be suitable for individual or group activities in class.

- **Handout 1-1** (LO 1) is designed to contrast the functions of management accounting and financial accounting.

- **Handout 1–2** (LO's 1 and 2) is designed to reinforce vocabulary concerning business organizations, accounting, and management functions.

- **Handout 1-3** (LO 4) is designed to compare and contrast variable and fixed costs per unit and in total.

- **Handout 1-4** (LO 4) is designed to test students' understanding of the different types of costs.

Handout 1-1 (LO1)

Enter the letter (X) next to the descriptions under the column for either managerial accounting or financial accounting.

Descriptions	Managerial Accounting	Financial Accounting
A. Primarily used by internal parties		
B. Prepared for use by creditors and investors		
C. Prepared according to GAAP		
D. Future-oriented		
E. Historical focus		
F. Includes budgets and cost reports		
G. Prepared periodically (monthly, quarterly, annually)		
H. Prepared when/as needed		
I. Prepared by product, region, or other business segment		
J. Prepared for the company as a whole		

Solution

Descriptions	Managerial Accounting	Financial Accounting
A. Primarily used by internal parties	X	
B. Prepared for use by creditors and investors		X
C. Prepared according to GAAP		X
D. Future-oriented	X	
E. Historical focus		X
F. Includes budgets and cost reports	X	
G. Prepared periodically (monthly, quarterly, annually)		X
H. Prepared when/as needed	X	
I. Prepared by product, region, or other business segment	X	
J. Prepared for the company as a whole		X

Handout 1-2 (LO's 1 and 2)

Fill in the blanks using the following words

Control	Directing/leading	Financial accounting
Managerial accounting	Manufacturers	Merchandisers
Planning/organizing	Organizing	Retailers
Service firms	Wholesalers	

1. The type of information used by external parties, such as investors, creditors, and regulators is called ________________.
2. The types of merchandisers that sell exclusively to other businesses are called ________________.
3. All of the actions that managers must take to implement the plan is called ________________.
4. The type of organization that purchases raw materials from suppliers and uses them to create a finished product is called ________________.
5. A key function of management that involves monitoring actual results to see whether the objectives set in the planning stage are being met is ________________.
6. The type of organization that provides services to other businesses or consumers is known as ________________.
7. The type of information used by internal business owners and managers is called ________________.
8. The types of merchandisers that sell to the general public are called ________________.
9. The aspect of the management process that involves setting goals along with the tactics that will be used to achieve those goals is called ________________.
10. The type of organization that purchases goods and sells them to other businesses or consumers is called ________________.

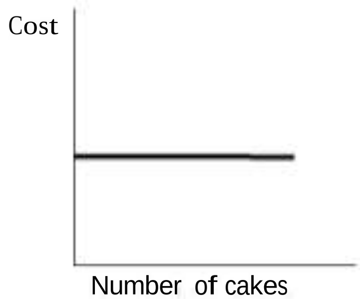
Solution:

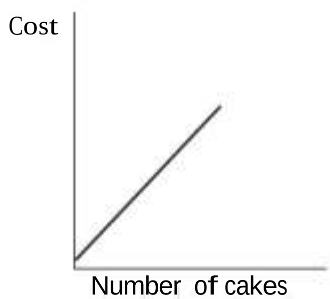
1. The type of information used by external parties, such as investors, creditors, and regulators is called ______**Financial Accounting**__.
2. The types of merchandisers that sell exclusively to other businesses are called ______**Wholesalers**________________.
3. All of the actions that managers must take to implement the plan is called ____**Directing/leading**____________.
4. The type of organization that purchases raw materials from suppliers and uses them to create a finished product is called ________**Manufacturers**____________.
5. A key function of management that involves monitoring actual results to see whether the objectives set in the planning stage are being met is ________**Control**__________.
6. The type of organization that provides services to other businesses or consumers is known as ______**Service firms**________________________.
7. The type of information used by internal business owners and managers is called ______**Managerial Accounting**________________.
8. The types of merchandisers that sell to the general public are called ______**Retailers**________________________.
9. The aspect of the management process that involves setting goals along with the tactics that will be used to achieve those goals is called **Planning/organizing** .
10. The type of organization that purchases goods and sells them to other businesses or consumers is called ______**Merchandisers**________________.

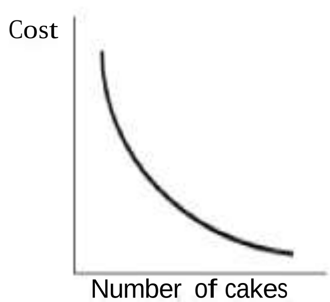
Handout 1-3 (LO4)

Which graph describes the following costs? (One letter is used twice.)

1. ______ Cost of flour for one cake - variable cost per unit
2. ______ A portion of the manager's salary allocated to each cake fixed cost per unit
3. ______ Cost of all butter used to make cakes for the day variable cost in total
4. _ _ _ Monthly rent on the bakery fixed cost in total

A.


B.


C.


Solution:

1. A 2. C 3. B 4. A

Handout 1-4 (LO4)

Answer as True or False. If the answer is False, change the statement to make it True.

1.____ A product cost is a manufacturing cost.

2.____ Advertising expense is a product cost.

3. There are three types of product cost: direct material, direct labor, and administrative expenses

4.____ Prime costs are direct material and direct labor.

5.____ Conversion costs are manufacturing overhead and direct material.

6.____ A relevant cost differs between decision alternatives.

7.____ A sunk cost must be incurred in the future.

8.____ Direct material is a period cost.

9.____ Product costs can be variable costs.

10 __ Direct costs can be traced conveniently to a specific product.

11 __ An opportunity cost is expensed in the period incurred.

12 __ Cost is the value given up in an exchange of goods or services.

Solution:

1.__T_ A product cost is a manufacturing cost.

2. F__Advertising expense is a product cost.
Correct Statement:
Advertising expense is a period cost.

3. ....F.._There are three types of product cost: direct material, direct labor, and administrative expenses
Correct Statement:
There are three types of product cost: direct material, direct labor, and manufacturing overhead.

4._T__**Prime** costs are direct material and direct labor.

5. F__Conversion costs are manufacturing overhead and direct material.
Correct Statement:
Conversion costs are direct labor and manufacturing overhead.

6. T A relevant cost differs between decision alternatives.

7. F A sunk cost must be incurred in the future.
Correct Statement:
A sunk cost was incurred in the past.

8.__F Direct material is a period cost.
Correct Statement:
Direct Material is a product cost.

9. T Product costs can be variable costs.

10.__T_Direct costs can be traced conveniently to a specific product.

11._F_An opportunity cost is expensed in the period incurred.
Correct Statement:
Opportunity costs are not expensed. opportunity costs are the foregone benefit when choosing one alternative over another.

12. T_Cost is the value given up in an exchange of goods or services.

Student Name: **Instructor**
Class: **McGraw-Hill/Irwin**
Problem 1-04

JIFFY JET

Requirement 1:

Factory rent	$	3,200	Product	MOH	«- Correct!
Company advertising		1,000	Period		«- Correct!
Wages paid to assembly workers		30,000	Product	DL	«- Correct!
Depreciation for salespersons' vehicles		2,000	Period		«- Correct!
Screws		500	Product	MOH	«- Correct!
Utilities for factory		900	Product	MOH	«- Correct!
Assembly supervisor's salary		3,500	Product	MOH	«- Correct!
Sandpaper		150	Product	MOH	«- Correct!
President's salary		6,000	Period		«- Correct!
Plastic tubing		4,200	Product	DM	«- Correct!
Paint		250	Product	MOH	«- Correct!
Sales commissions		1,200	Period		«- Correct!
Factory insurance		1,000	Product	MOH	«- Correct!
Depreciation on cutting machines		2,000	Product	MOH	«- Correct!
Wages paid to painters		7,500	Product	DL	«- Correct!

Requirement 2:

a. Direct Material	$	4,200	<--Correct!
b. Direct Labor	$	37,500	<--Correct!
c. Manufacturing Overhead	$	11,500	<--Correct!
d. Prime Cost	$	41,700	<--Correct!
e. Conversion Cost	$	49,000	<--Correct!
f. Total product Cost	$	53,200	<--Correct!

Requirement 3:

According to GAAP, product costs must be counted as inventory (raw materials, work in process or finished goods} until the product is sold. Period expenses are expensed immediately and are never included in inventory. If the period costs were mistakenly classified as product costs AND Jiffy had significant amounts of inventory in the form of raw materials, work in process or finished goods, then Jiffy's inventory (assets) would be overstated on the balance sheet, while operating expenses would be understated on the income statement.

en Data PA1-04:

JIFF

Chapter 1

Introduction to Managerial Accounting

Learning Objective 1–1

Describe the key differences between financial accounting and managerial accounting.

Role of Managerial Accounting in Organizations

Decision-Making Orientation

↓

The purpose of managerial accounting is to provide useful information to internal managers to help them make decisions that arise as they manage people, projects, products, or segments of the business.

Comparison of Financial and Managerial Accounting

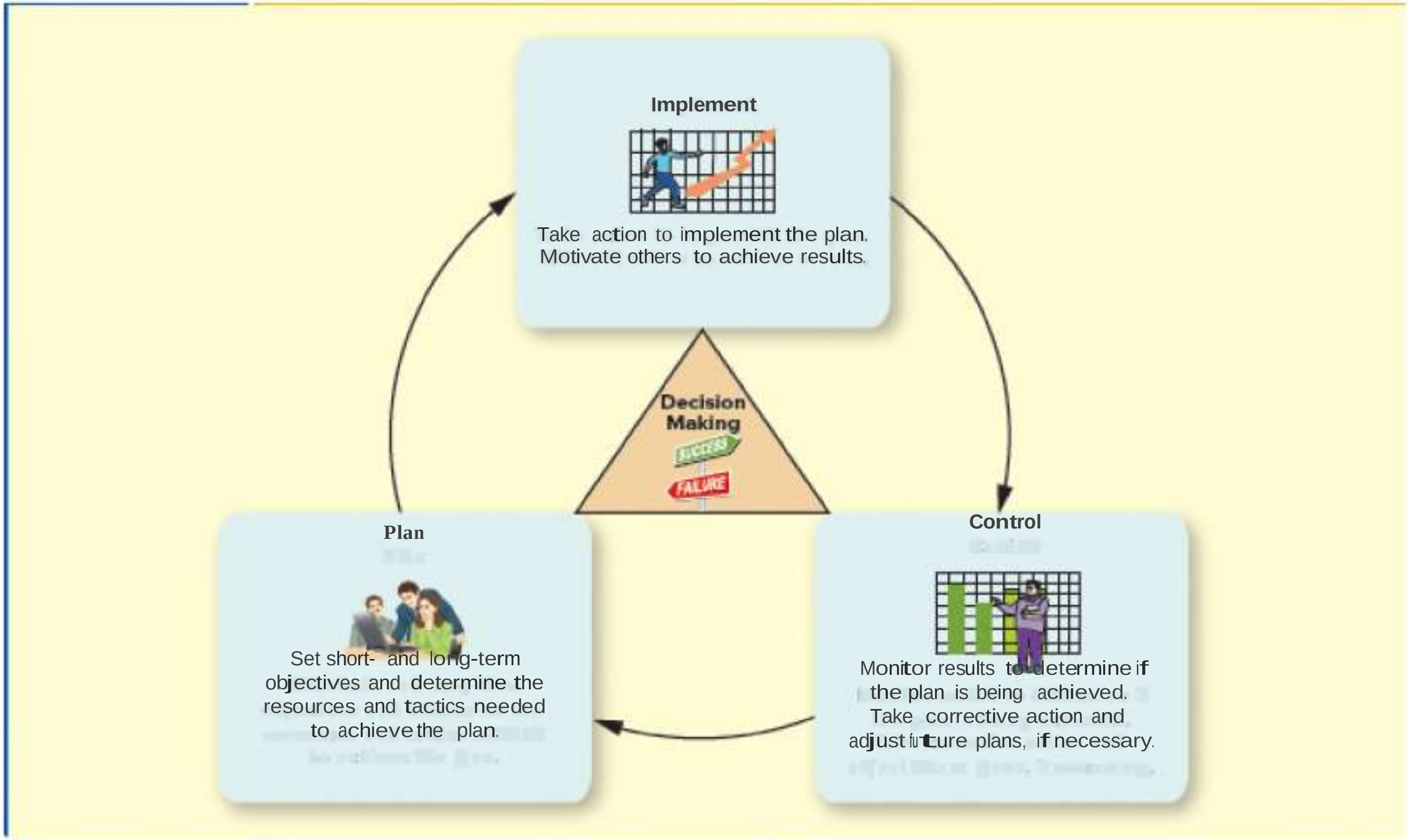
	Financial Accounting	Managerial Accounting
		
User perspective	Used by external parties, such as investors, creditors, and regulators	Used by internal parties, such as managers and employees
Types of reports	Classified financial statements prepared according to GAAP	Various internal reports, such as budgets, performance evaluations, and cost reports
Nature of information	Objective, reliable, historical	Subjective, relevant, future oriented
Frequency of reporting	Prepared periodically (monthly, quarterly, annually)	Prepared as needed, perhaps day-to-day or even in real time
Level of detail	Information reported for the company as a whole	Information reported at the decision-making level (by product, region, customer, or other business segment)

Left: © Andersen Ross/Brand X/Corbis; Right: © Robert Nicholas/Getty Images

Learning Objective 1-2

Describe how managerial accounting is used in different types of organizations to support the key functions of management.

Functions of Management



Types of Organizations

Manufacturers . . .

- Purchase raw materials from suppliers and use them to create a finished product.
- Sell finished products to customers.

Merchandisers . . .

- Sell the goods that manufacturers produce.
- That sell goods to other businesses are called wholesalers.
- That sell goods to the general public are called retailers.

Service companies . . .

- Provide a service to customers or clients.

Learning Objective 1-3

Describe the role of ethics in managerial decision making, the effects of the Sarbanes• Oxley Act, and sustainability accounting.

Ethics and Internal Reporting

Managers are increasingly being held responsible for creating and maintaining an ethical work environment including the reporting of accounting information.

Ethics refers to the standards of conduct for judging right from wrong, honest from dishonest, and fair from unfair. Many situations in business require accountants and managers to weigh the pros and cons of alternatives before making final decisions.

Sarbanes-Oxley (SOX) Act of 2002

The Sarbanes-Oxley Act of 2002 was primarily aimed at renewing investor confidence in the external financial reporting system. However, it has many implications for managers such as:

1. Reducing opportunities for error and fraud.
2. Counteracting incentives for fraud.
3. Encouraging good character.

Sustainability Accounting

Sustainability accounting aims at providing managers with a broader set of information to meet the needs of multiple stakeholders, with the goal of ensuring the company's long-term survival in an uncertain and resource-constrained world. Sustainability accounting focuses on balancing:

1. Society
2. Economy
3. Environment

The Role of Cost in Managerial Accounting

Learning Objective 1-4

Define and give examples of different types of cost:

1. Out-of-pocket versus opportunity costs.
2. Direct versus indirect costs.
3. Variable versus fixed costs.
4. Manufacturing versus nonmanufacturing costs.
5. Product versus period costs.
6. Relevant versus irrelevant costs.

Cost Terminology

In this chapter, we introduce the terminology you will use to categorize or sort cost into different "buckets," including:

- Direct or Indirect
- Variable or Fixed
- Manufacturing or Nonmanufacturing
- Product or Period
- Relevant or Irrelevant

Out-of-Pocket versus Opportunity Costs

Out-of-pocket costs involve an actual outlay of cash.

An opportunity cost is the foregone benefit (or lost opportunity) of the path not taken. Anytime you choose to do one thing instead of another because of a limit on your time or money, you incur an opportunity cost.

Direct versus Indirect Costs

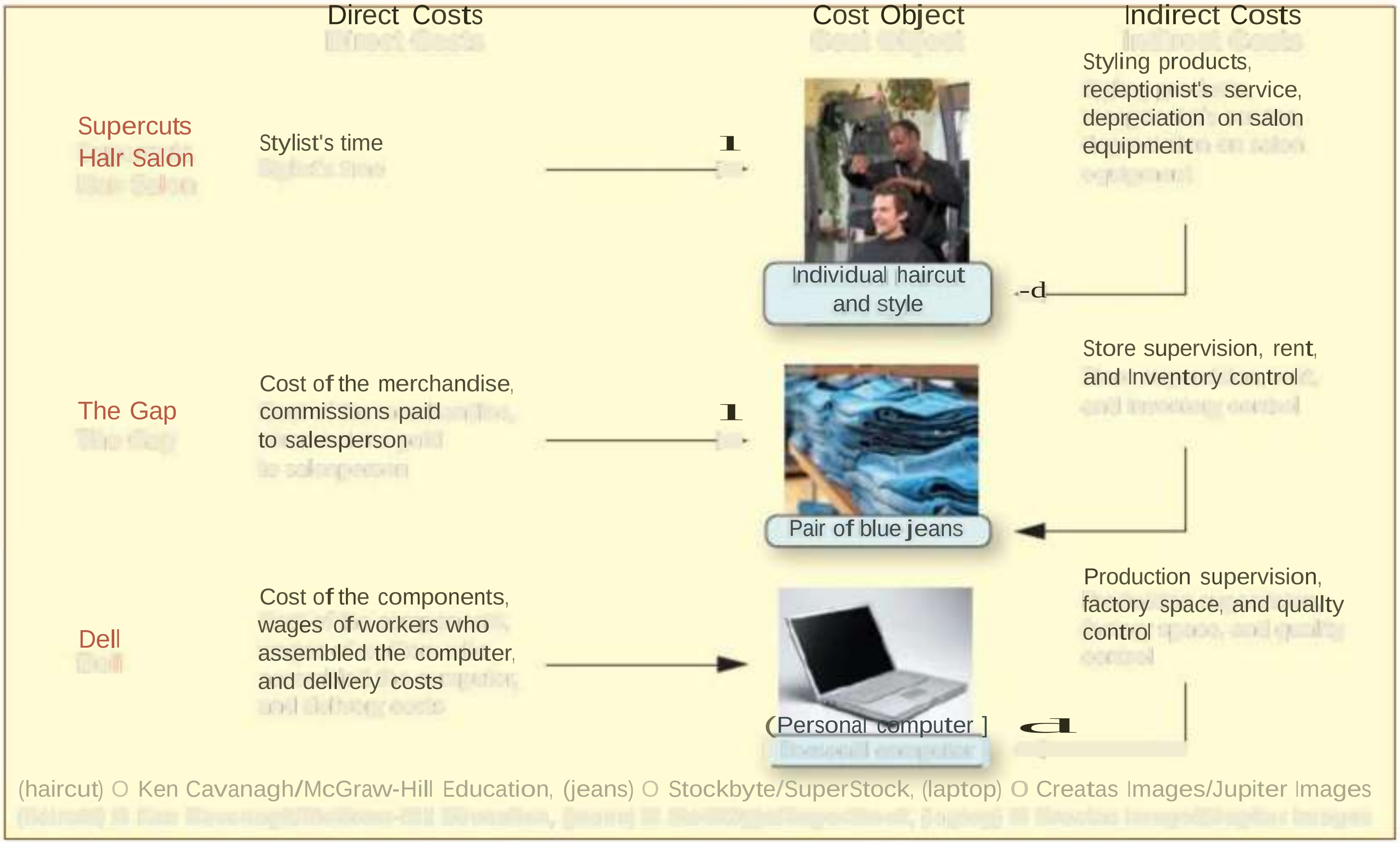
Direct Costs

- Costs that can be easily and conveniently traced to a unit of product or other cost object.
- Example: For California Pizza Kitchen, direct costs would include the costs of materials and labor that can be traced directly to each pizza produced.

Indirect Costs

- Costs that cannot be easily and conveniently traced to a unit of product or other cost object.
- Example: At California Pizza Kitchen, indirect costs include items such as depreciation on the ovens used to bake the pizzas as well as the costs of utilities, advertising, and supervision.

Real-World Examples of Direct versus Indirect Costs



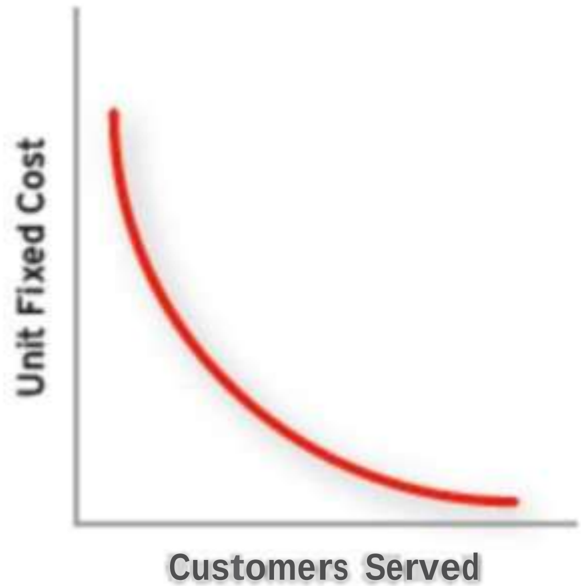
Variable versus Fixed Costs

Variable costs **change, in total, in direct proportion to changes in activity level.**

Variable Cost Behavior

Variable versus Fixed Costs

Fixed costs **do not change in total regardless of the activity level, at least within some reasonable range of activity. Average or per-unit fixed costs vary inversely with the number of units produced or the number of customers served.**



Manufacturing versus Nonmanufacturing Costs

Manufacturing costs include all costs incurred to produce the physical product.

Direct Materials

Direct Labor

Manufacturing Overhead

The Product

Manufacturing versus Nonmanufacturing Costs

Direct materials are major material inputs that can be physically and conveniently traced directly to the final product.

Example: Glass windows installed in an automobile

Manufacturing versus Nonmanufacturing Costs

Direct labor is the cost of labor that can be physically and conveniently traced to the final product.

Example: Wages paid to automobile assembly workers

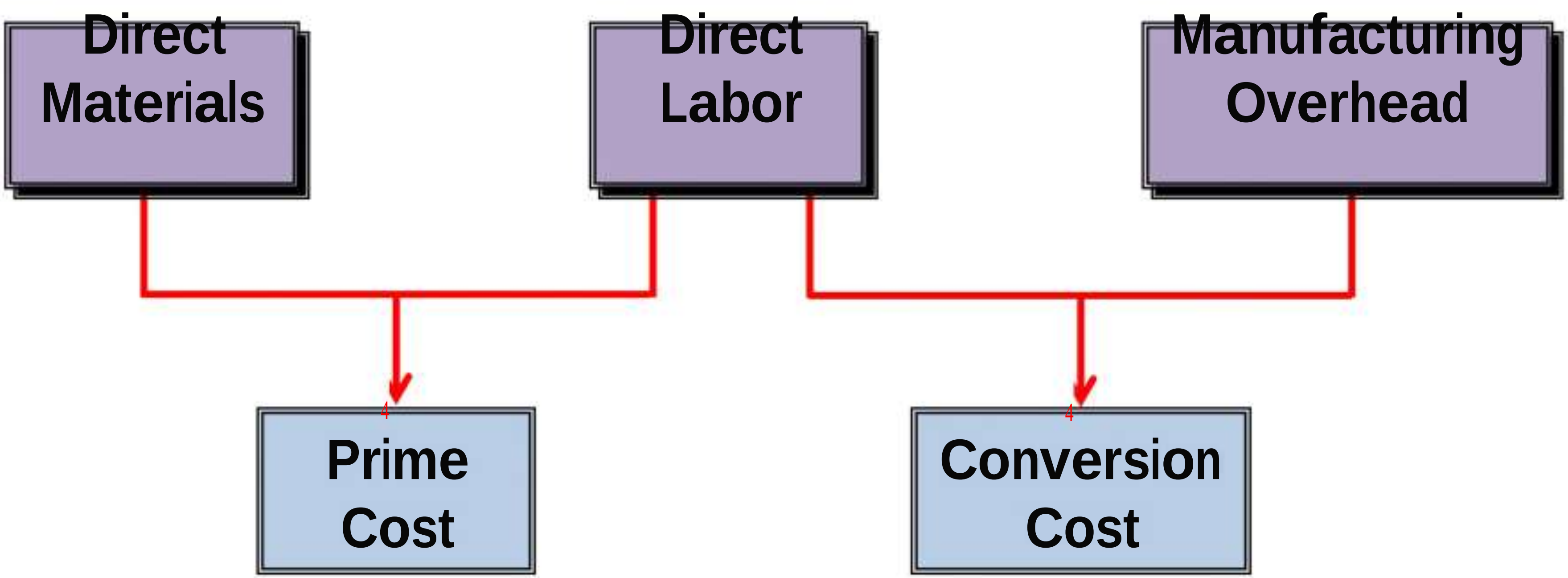
Manufacturing versus Nonmanufacturing Costs

Manufacturing overhead includes all costs other than direct materials and direct labor that must be incurred to manufacture a product.

Manufacturing overhead costs include the following costs at the manufacturing facility: maintenance and repairs on production equipment, utilities, property taxes, depreciation, insurance, and salaries for supervisors, janitors, and security guards.

Manufacturing versus Nonmanufacturing Costs

Manufacturing costs are often combined as follows:



Manufacturing versus Nonmanufacturing Costs

Nonmanufacturing Costs

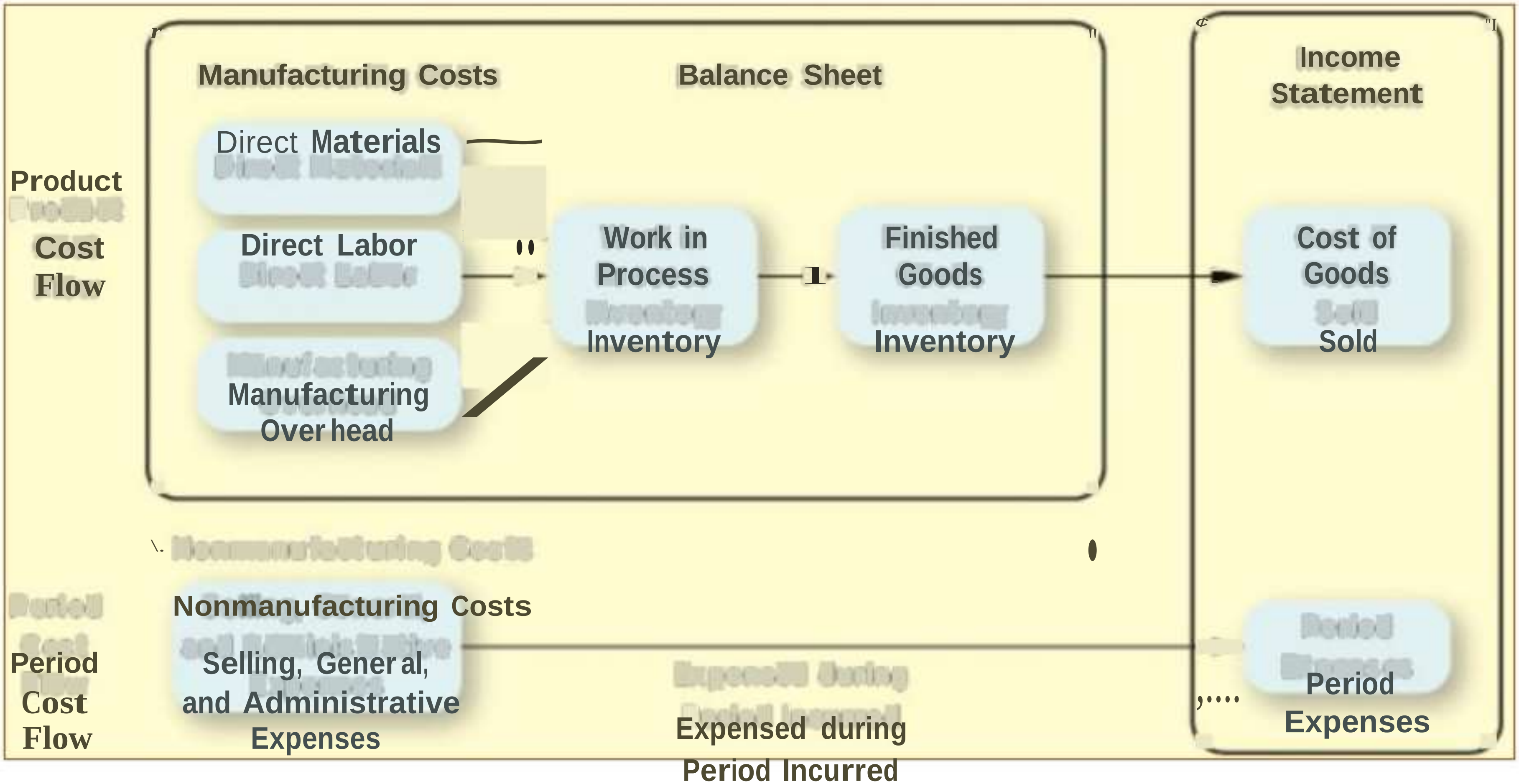
Marketing or Selling Costs

Costs necessary to get the order and deliver the product

General and Administrative Costs

All executive, organizational, and clerical costs

Product versus Period Costs



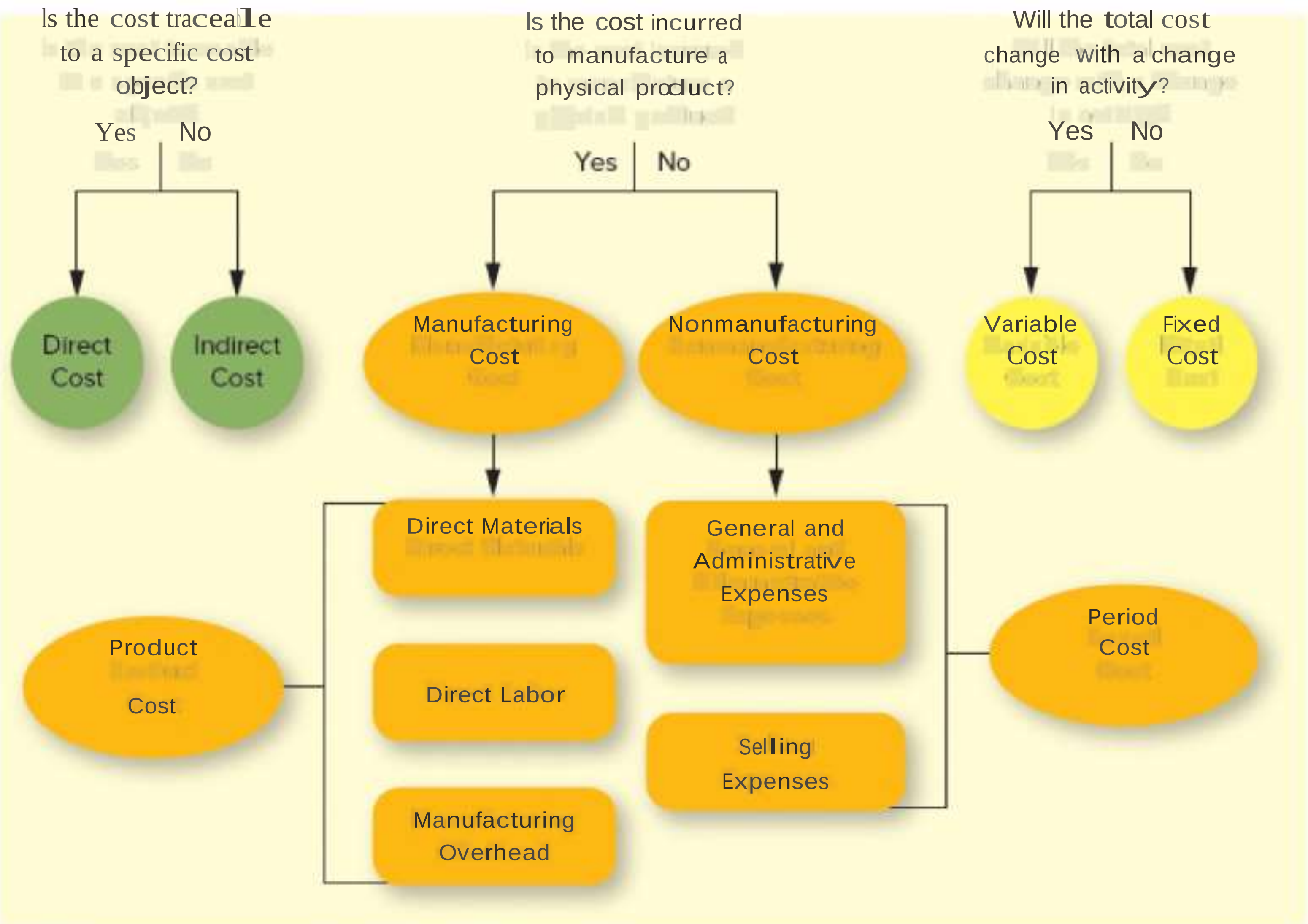
Relevant versus Irrelevant Costs

A relevant cost has the potential to influence a decision, while an irrelevant cost will not influence a decision.

For a cost to be relevant, it must:

1. **Differ between the decision alternatives. Costs that differ between the alternatives are called incremental or differential costs.**
2. **Be incurred in the future rather than the past. Costs incurred in the past are called sunk costs.**

Cost Classification System



End of Chapter 1