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## 1

## MANAGERIAL ACCOUNTING AN OVERVIEW

**Financial accounting:** is concerned with reporting financial information to external users such as stockholders' creditors and regulators

**Managerial accounting:** is concerned with providing information to managers for use within the organization

Differences between financial and managerial accounting		
<b>Users</b>	Outside the organization, owners creditors, tax authorities, regulators	Inside the organization for managers who plan, control and make decisions
<b>Time focus</b>	Historical activities or past activities	Future emphasizes, affect the future
<b>Verifiability VS relevance</b>	Emphasizes on objectivity and verifiability	Emphasizes relevance
<b>Precision vs. timeliness</b>	Emphasizes precision	Emphasizes timeliness
<b>subject</b>	Emphasizes on companywide reports	Emphasizes on segment reports
<b>rules</b>	Must follow GAAP OR IFRS	Need not to follow GAAP OR IFRS
<b>Requirement</b>	Mandatory for external reports	Not mandatory

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**2****Managerial accounting helps managers perform three activities:**

- planning
- controlling
- decision making

Planning: involves establishing goals and specifying how to achieve them

Controlling: involves gathering feedback to ensure that the plan is being properly executed or modified as circumstances change.

Decision making: involves selecting a course of action from competing alternatives

Budget: is a detailed plan for the future that is usually expressed in formal quantitative terms

Performance report: compares the actual results with the budget

**skills that managers need to succeed:**

- strategic management skills

Strategy: is a game plan that enables a company's strategy to attract customers by distinguishing itself from competitors

**Customer value propositions:**

**1**-customer intimacy: We make products and services to meet customers individual needs better than our competitors

**2**-Operational excellence: We deliver product and services faster, more conveniently and at lower price than our competitors

Product leadership: You should choose us because we offer higher quality products than our competitors

### Enterprise risk management skills

Examples of risks			
Computers hackers	complying with laws	employee theft	product harming customers
Managers can deal with risks by accepting avoiding or reducing the risk			

- process management skills

#### **business process:**

1. Lean thinking or lean production: Just in time
2. the theory of constraints

- measurement skills
- leadership skills

- leadership skills:

1. expertise and knowledgeable of the company
2. integrity
3. effectively implement organizational changes
4. communication skills
5. motivate and mentoring other individuals
6. effectively manage team based decision processes

certificates:

CMA: Certified management accountant

CPA

## 3

**MANAGERIAL ACCOUNTING AND COST CONCEPTS****manufacturing costs:**

- 1- direct material: raw material
- 2- direct labor
- 3- manufacturing overhead (indirect manufacturing cost - factory overhead - factory burden):

indirect labor and materials	Maintenance and repairs on production equipment
heat and light	property taxes
Depreciation	insurance on manufacturing facilities

**Non-manufacturing costs:** Selling, general and administrative costs (SG&A)  
Or selling and administrative costs.

- 1-Selling costs (order getting and order filling costs): includes all costs that are incurred to secure customer orders and get the finished product to the customer
- 2-administrative costs: includes all costs associated with the general management of an organization rather than for manufacturing or selling.

Executive compensations	general accounting	secretarial
public relations	rental costs for administrative offices	

indirect material and indirect labor are to support the production process	
Indirect material	Indirect labor
Lubricants	maintenance workers
cleaning supplies	janitors
	security guards

# Managerial Accounting



$$\text{Direct cost} = \text{DL} + \text{DM}$$

$$\text{indirect cost} = \text{V.MOH} + \text{F.MOH}$$

$$\text{Product cost/ Total Man. cost} = \text{Direct cost} + \text{Indirect cost}$$

$$\text{Period cost} = \text{sales commission} + \text{V.adm} + \text{F.adm} + \text{F.selling}$$

## Fixed MOH

إذا بالسؤال معطينكم ياه per unit مثلاً \$2 لإنتاج مثلاً 4000 حبة، و بعدها يبيكم تحسبون ال F.MOH لكمية مختلفة مثلاً 3000، فاهني نقول 2 ضرب 4000 و ليس الكمية الجديدة 3000. فراح يطلع الناتج \$8000، هذا ال F.MOH ل 4000 و 3000 حبة *considered within the relevant range* ما ضربناه ب 3000، لأن ال FIXED ثابت بالمجموع مو للحبة، فلازم نرده لأساسه الي مطعين عليه تكلفة الحبة.



1	A factory supervisor's salary would be classified as an indirect cost with respect to a unit of product.	TRUE
2	A direct cost is a cost that can be easily traced to the particular cost object under consideration.	TRUE
3	A cost can be direct or indirect. The classification can change if the cost object changes.	TRUE
4	Wages paid to production supervisors would be classified as manufacturing overhead.	TRUE
5	Selling costs are indirect costs.	FALSE
6	The sum of all manufacturing costs except for direct materials and direct labor is called manufacturing overhead.	TRUE
7	The three cost elements ordinarily included in product costs are direct materials, direct labor, and manufacturing overhead.	TRUE
8	Administrative costs are indirect costs.	FALSE

1) The following cost data pertain to the operations of Quinonez Department Stores, Inc., for the month of September.

Corporate headquarters building lease	\$ 77,000
Cosmetics Department sales commissions—Northridge Store	\$ 4,000
Corporate legal office salaries	\$ 59,000
Store manager's salary—Northridge Store	\$ 11,000
Heating-Northridge Store	\$ 10,000
Cosmetics Department cost of sales—Northridge Store	\$ 37,000
Central warehouse lease cost	\$ 16,000
Store security—Northridge Store	\$ 12,000
Cosmetics Department manager's salary—Northridge Store	\$ 4,000

The Northridge Store is just one of many stores owned and operated by the company. The Cosmetics Department is one of many departments at the Northridge Store. The central warehouse serves all of the company's stores.

What is the total amount of the costs listed above that are direct costs of the Cosmetics Department?

- A) \$78,000
- B) \$45,000**
- C) \$41,000
- D) \$37,000

What is the total amount of the costs listed above that are NOT direct costs of the Northridge Store?

- A) \$152,000**
- B) \$33,000
- C) \$45,000
- D) \$77,000



2) The following cost data pertain to the operations of Ladwig Department Stores, Inc., for the month of December.

Corporate legal office salaries	\$ 68,000
Shoe Department cost of sales—Brentwood Store	\$ 66,000
Corporate headquarters building lease	\$ 86,000
Store manager's salary—Brentwood Store	\$ 10,000
Shoe Department sales commissions—Brentwood Store	\$ 5,000
Store utilities—Brentwood Store	\$ 11,000
Shoe Department manager's salary—Brentwood Store	\$ 3,000
Central warehouse lease cost	\$ 3,000
Janitorial costs—Brentwood Store	11,000

The Brentwood Store is just one of many stores owned and operated by the company. The Shoe Department is one of many departments at the Brentwood Store. The central warehouse serves all of the company's stores.

What is the total amount of the costs listed above that are direct costs of the Shoe Department?

- A) \$66,000
- B) \$74,000**
- C) \$106,000
- D) \$71,000

What is the total amount of the costs listed above that are NOT direct costs of the Brentwood Store?

- A) \$74,000
- B) \$32,000
- C) \$157,000**
- D) \$86,000

3) Which of the following would most likely NOT be included as manufacturing overhead in a furniture factory?

- A) The cost of the glue in a chair.
- B) The amount paid to the individual who stains a chair.**
- C) The workman's compensation insurance of the supervisor who oversees production.
- D) The factory utilities of the department in which production takes place.

4) Manufacturing overhead includes:

- A) all direct material, direct labor and administrative costs.
- B) all manufacturing costs except direct labor.
- C) all manufacturing costs except direct labor and direct materials.**
- D) all selling and administrative costs.

5) The salary paid to the president of a company would be classified on the income statement as a(n):

- A) **administrative expense.**
- B) direct labor cost.
- C) manufacturing overhead cost.
- D) selling expense.

6) Which of the following statements concerning direct and indirect costs is NOT true?

- A) **Whether a particular cost is classified as direct or indirect does not depend on the cost object.**
- B) A direct cost is one that can be easily traced to the particular cost object.
- C) The factory manager's salary would be classified as an indirect cost of producing one unit of product.
- D) A particular cost may be direct or indirect, depending on the cost object.

7) Direct costs:

- A) are incurred to benefit a particular accounting period.
- B) are incurred due to a specific decision.
- C) **can be easily traced to a particular cost object.**
- D) are the variable costs of producing a product.

## 4

costs:

1- product costs (inventoriable costs): direct labor direct material MOH

2- period costs: All costs that are not product cost all selling and administrative expense are treated as period cost.

costs:

1-prime costs: DM + DL

2-conversion costs: DL + MOH

1	Prime cost is the sum of direct materials cost and direct labor cost.	TRUE
2	Product costs are also known as inventoriable costs.	TRUE
3	Prime cost equals manufacturing overhead cost.	FALSE
4	Depreciation is always considered a period cost for external financial reporting purposes in a manufacturing company.	FALSE
5	Conversion cost is the sum of direct labor cost and manufacturing overhead cost.	TRUE
6	In a manufacturing company, all costs are period costs.	FALSE
7	Advertising is not a considered a product cost even if it promotes a specific product.	TRUE
8	Selling and administrative expenses are period costs under generally accepted accounting principles.	TRUE
9	Conversion cost equals product cost less direct materials cost.	TRUE
10	Conversion cost is the same thing as manufacturing overhead.	FALSE
11	The cost of shipping parts from a supplier is considered a period cost.	FALSE
12	Depreciation on equipment a company uses in its selling and administrative activities would be classified as a period cost.	TRUE

1) The costs of direct materials are classified as:

	Conversion cost	Manufacturing cost	Prime cost
A)	Yes	Yes	Yes
B)	No	No	No
C)	Yes	Yes	No
D)	No	Yes	Yes

- A) Choice A  
 B) Choice B  
 C) Choice C  
**D) Choice D**

2) Materials used in a factory that are not an integral part of the final product, such as cleaning supplies, should be classified as:

- A) direct materials.  
 B) a period cost.  
 C) administrative expense.  
**D) manufacturing overhead.**

3) Which of the following is NOT a period cost?

- A) Depreciation of factory maintenance equipment.**  
 B) Salary of a clerk who handles customer billing.  
 C) Insurance on a company showroom where customers can view new products.  
 D) Cost of a seminar concerning tax law updates that was attended by the company's controller.

4) The cost of electricity for running production equipment is classified as:

	Conversion cost	Period cost
A)	Yes	No
B)	Yes	Yes
C)	No	Yes
D)	No	No

- A) Choice A**  
 B) Choice B  
 C) Choice C  
 D) Choice D

5) The cost of lubricants used to grease a production machine in a manufacturing company is an example of a(n):

- A) period cost.  
 B) direct material cost.  
**C) indirect material cost.**  
 D) opportunity cost.

6) Wages paid to the factory warehouse foreman are considered an example of:

	Direct Labor	Period Cost
A)	Yes	Yes
B)	Yes	No
C)	No	Yes
D)	No	No

- A) Choice A  
 B) Choice B  
 C) Choice C  
**D) Choice D**

7) A factory supervisor's wages are classified as:

	Indirect labor	Fixed manufacturing overhead
A)	No	No
B)	Yes	Yes
C)	Yes	No
D)	No	Yes

- A) Choice A  
**B) Choice B**  
 C) Choice C  
 D) Choice D

8) Product costs that have become expenses can be found in:

- A) period costs.  
 B) selling expenses.  
**C) cost of goods sold.**  
 D) administrative expenses.

9) The cost of direct materials is classified as a:

	Conversion cost	Prime cost
A)	No	No
B)	Yes	No
C)	No	Yes
D)	Yes	Yes

- A) Choice A  
 B) Choice B  
**C) Choice C**  
 D) Choice D

10) Which of the following costs is classified as both a prime cost and a conversion cost?

A) Direct materials.

**B) Direct labor.**

C) Variable overhead.

D) Fixed overhead.

11) Which of the following is an example of a period cost in a company that makes clothing?

A) Fabric used to produce men's pants.

**B) Advertising cost for a new line of clothing.**

C) Factory supervisor's salary.

D) Monthly depreciation on production equipment.

12) All of the following are examples of product costs except:

**A) depreciation on the company's retail outlets.**

B) salary of the plant manager.

C) insurance on the factory equipment.

D) rental costs of factory equipment.

13) Which of the following statements about product costs is true?

A) Product costs are deducted from revenue when the production process is completed.

B) Product costs are deducted from revenue as expenditures are made.

**C) Product costs associated with unsold finished goods and work in process appear on the balance sheet as assets.**

D) Product costs appear on financial statements only when products are sold.

14) Which of the following statements is correct in describing manufacturing overhead?

A) Manufacturing overhead when combined with direct materials cost forms conversion cost.

**B) Manufacturing overhead consists of all manufacturing cost except for prime cost.**

C) Manufacturing overhead is a period cost.

D) Manufacturing overhead when combined with direct labor cost forms prime cost.

15) Direct labor cost is classified as:

	Conversion cost	Prime Cost
A)	Yes	Yes
B)	No	No
C)	No	Yes
D)	Yes	No

**A) Choice A**

B) Choice B

C) Choice C

D) Choice D

16) The fixed portion of the cost of electricity for a manufacturing facility is classified as a:

	Period cost	Product Cost
A)	Yes	Yes
B)	No	No
C)	No	Yes
D)	Yes	No

- A) Choice A  
 B) Choice B  
 C) **Choice C**  
 D) Choice D

17) Prime cost consists of:

- A) direct labor and manufacturing overhead.  
 B) direct materials and manufacturing overhead.  
 C) **direct materials and direct labor.**  
 D) direct materials, direct labor and manufacturing overhead.

18) The following costs were incurred in May:

Direct materials	\$ 41,000
Direct labor	\$ 13,000
Manufacturing overhead	\$ 46,000
Selling expenses	\$ 18,000
Administrative expenses	\$ 15,000

Conversion costs during the month totaled:

- A) \$54,000  
 B) \$133,000  
 C) **\$59,000**  
 D) \$87,000

19) The following costs were incurred in May:

Direct materials	\$ 33,000
Direct labor	\$ 13,000
Manufacturing overhead	\$ 23,000
Selling expenses	\$ 16,000
Administrative expense	\$ 34,000

Prime costs during the month totaled:

- A) \$36,000  
 B) \$119,000  
 C) \$69,000  
 D) **\$46,000**

20) In May direct labor was 60% of conversion cost. If the manufacturing overhead for the month was \$54,000 and the direct materials cost was \$30,000, the direct labor cost was:

- A) \$36,000
- B) \$20,000
- C) \$81,000**
- D) \$45,000

21) During the month of May, direct labor cost totaled \$10,000 and direct labor cost was 40% of prime cost. If total manufacturing costs during May were \$86,000, the manufacturing overhead was:

- A) \$76,000
- B) \$25,000
- C) \$61,000**
- D) \$15,000

22) Abburi Company's manufacturing overhead is 60% of its total conversion costs. If direct labor is \$52,000 and if direct materials are \$28,000, the manufacturing overhead is:

- A) \$34,667
- B) \$78,000**
- C) \$42,000
- D) \$120,000

23) A manufacturing company prepays its insurance coverage for a three-year period. The premium for the three years is \$2,100 and is paid at the beginning of the first year. Sixty percent of the premium applies to manufacturing operations and forty percent applies to selling and administrative activities. What amounts should be considered product and period costs respectively for the first year of coverage?

	Product	Period
A)	\$280	\$420
B)	\$420	\$280
C)	\$700	\$0
D)	\$0	\$700

- A) Choice A
- B) Choice B**
- C) Choice C
- D) Choice D

24) Property taxes on a company's factory building would be classified as a(n):

- A) product cost.**
- B) opportunity cost.
- C) period cost.
- D) variable cost.



25) Vignana Corporation manufactures and sells hand-painted clay figurines of popular sports heroes. Shown below are some of the costs incurred by Vignana for last year:

Cost of clay used in production	\$ 65,000
Wages paid to the workers who paint the figurines	\$ 90,000
Wages paid to the sales manager's secretary	\$ 22,000
Cost of junk mail advertising	\$ 47,000

What is the total of the direct costs above?

- A) \$65,000
- B) \$112,000
- C) **\$155,000**
- D) \$202,000

What is the total of the product costs above?

- A) \$0
- B) \$69,000
- C) **\$155,000**
- D) \$159,000

What is the total of the conversion costs above?

- A) \$65,000
- B) \$69,000
- C) **\$90,000**
- D) \$155,000

26) Management of Mcgibboney Corporation has asked your help as an intern in preparing some key reports for November. Direct materials cost was \$42,000, direct labor cost was \$25,000, and manufacturing overhead was \$62,000. Selling expense was \$21,000 and administrative expense was \$38,000.

The conversion cost for November was:

- A) \$116,000
- B) \$79,000
- C) **\$87,000**
- D) \$129,000

The prime cost for November was:

- A) \$79,000
- B) \$59,000
- C) **\$67,000**
- D) \$87,000

27) A partial listing of costs incurred at Archut Corporation during September appears below:

Direct materials	\$ 113,000
Utilities, factory	\$ 5,000
Administrative salaries	\$ 81,000
Indirect labor	\$ 25,000
Sales commissions	\$ 48,000
Depreciation of production equipment	\$ 20,000
Depreciation of administrative equipment	\$ 30,000
Direct labor	\$ 129,000
Advertising	135,000

The total of the manufacturing overhead costs listed above for September is:

- A) \$586,000
- B) \$50,000**
- C) \$292,000
- D) \$30,000

The total of the product costs listed above for September is:

- A) \$292,000**
- B) \$294,000
- C) \$50,000
- D) \$586,000

The total of the period costs listed above for September is:

- A) \$294,000**
- B) \$344,000
- C) \$292,000
- D) \$50,000

## 5

**COST CLASSIFICATION FOR PREDICTING COST BEHAVIOR**

Fashion designer want to do a seminar about designing and styling. she booked a hall that fits 10 persons only (100 kd). she also wants to give the participants giveaways like note, coffee, pen and sample of the textile.

Hall cost(100kd) is a \_\_\_\_\_ cost.

Giveaways costs (5kd) is a \_\_\_\_\_ cost.

	Per unit	In total
Fixed costs	Variable	Fix
Variable costs	Fix	Variable
Variable costs increase with the increase in the level of activity, but fix costs remain constant with the increase in the level of activity within the relevant range.		

Variable costs	Fix costs
COGS	Straight line depreciation
Direct material	insurance
Direct labor	Property taxes
Variable elements of MOH	Rent
Variable elements S&Adm expense: commissions - shipping costs	Administrative salaries
	Advertising

1	Indirect costs, such as manufacturing overhead, are variable costs.	FALS
2	If the activity level increases, then one would expect the fixed cost per unit to increase as well.	FALS
3	A fixed cost is a cost whose cost per unit varies as the activity level rises and falls.	TRUE
4	Cost behavior is considered curvilinear whenever a straight line is a reasonable approximation for the relation between cost and activity.	FALSE
5	A decrease in production will ordinarily result in a decrease in fixed production costs per unit.	FALSE
6	The cost of napkins put on each person's tray at a fast food restaurant is a variable cost with respect to how many persons are served.	TRUE
7	The variable cost per unit depends on how many units are produced.	FALSE
8	In account analysis, an account is classified as either variable or fixed based on an analyst's prior knowledge of how the cost in the account behaves.	TRUE
9	Variable costs per unit are not affected by changes in activity.	TRUE
10	A fixed cost fluctuates in total as activity changes but remains constant on a per unit basis over the relevant range.	FALSE
11	Fixed costs expressed on a per unit basis do not change with changes in activity.	FALSE
12	A fixed cost is constant if expressed on a per unit basis but the total dollar amount changes as the number of units increases or decreases.	FALSE
13	If managers are reluctant to lay off direct labor employees when activity declines leads to a decrease in the ratio of variable to fixed costs.	TRUE
14	A variable cost remains constant if expressed on a unit basis.	TRUE
15	A fixed cost is not constant per unit of product.	TRUE

1) Rotonga Manufacturing Company leases a vehicle to deliver its finished products to customers. Which of the following terms correctly describes the monthly lease payments made on the delivery vehicle?

	Direct Cost	Fixed Cost
A)	Yes	Yes
B)	Yes	No
C)	No	Yes
D)	No	No

2) Depreciation on a personal computer used in the marketing department of a manufacturing company would be classified as:

- A) a product cost that is fixed with respect to the company's output.
- B) a period cost that is fixed with respect to the company's output.**
- C) a product cost that is variable with respect to the company's output.
- D) a period cost that is variable with respect to the company's output.

3) The following data have been collected for four different cost items.

Cost Item	Cost at 100 units	Cost at 140 units
W	\$ 8,000	10,560
X	\$ 5,000	5,000
Y	\$ 6,500	9,100
Z	\$ 6,700	8,580

Which of the following classifications of these cost items by cost behavior is correct?

The costs of direct materials are classified as:

	Cost W	Cost X	Cost Y	Cost Z
A)	variable	fixed	mixed	variable
B)	mixed	fixed	variable	mixed
C)	variable	fixed	variable	variable
D)	mixed	fixed	mixed	mixed

A) Choice A

**B) Choice B**

C) Choice C

D) Choice D

93) For the past 8 months, Jinan Corporation has experienced a steady increase in its cost per unit even though total costs have remained stable. This cost per unit increase may be due to \_\_\_\_\_ costs if the level of activity at Jinan is \_\_\_\_\_.

**A) fixed, decreasing**

B) fixed, increasing

C) variable, decreasing

D) variable, increasing

4) Which of the following production costs, if expressed on a per unit basis, would be most likely to change significantly as the production level varies?

A) Direct materials.

B) Direct labor.

**C) Fixed manufacturing overhead.**

D) Variable costs.

5) Fixed costs expressed on a per unit basis:

A) increase with increases in activity.

**B) decrease with increases in activity.**

C) are not affected by activity.

D) should be ignored in making decisions since they cannot change.

## 6

**Fixed costs:**

**1-** Committed fixed cost: represent organizational investments with a multiyear planning horizon that can't be significantly reduced even for short periods of time without making fundamental changes.

Facilities and equipment	real estate taxes
insurance expenses	salaries of top management

**2-** Discretionary fixed costs (managed fixed costs): usually arise from annual decisions by management to spend on certain fixed costs items.

advertising	Research	public relations
management development programs	internship for students.	

**Relevant range:** is the range of activity within which the assumption that cost behavior is strictly linear is reasonably valid outside of the relevant range.

1	The relevant range is the range of activity within which the assumption that cost behavior is strictly linear is reasonably valid.	TRUE
2	The concept of the relevant range does not apply to variable costs.	FALSE
3	As activity decreases within the relevant range, fixed costs remain constant on a per unit basis.	FALSE
4	When operations are interrupted or cut back, committed fixed costs are cut in the short term because the costs of restoring them later are likely to be far less than the short-run savings that are realized	FALSE
5	Committed fixed costs remain largely unchanged in the short run.	TRUE
6	Within the relevant range, a change in activity results in a change in variable cost per unit and total fixed cost.	FALSE
7	A step-variable cost is a cost that is obtained in large chunks and that increases or decreases only in response to fairly wide changes in activity.	TRUE
8	The relevant range concept is applicable to mixed costs.	TRUE
9	Committed fixed costs represent organizational investments with a one-year planning horizon.	FALSE
10	The following costs are all examples of committed fixed costs: depreciation on buildings, salaries of highly trained engineers, real estate taxes, and insurance expenses.	TRUE

1) Which of the following is correct concerning reactions to INCREASES in activity?

	Total Variable Cost	Variable Cost Per Unit
A)	Increase	Decrease
B)	Constant	Decrease
C)	Decrease	Constant
D)	Increase	Constant

- A) Choice A  
 B) Choice B  
 C) Choice C  
**D) Choice D**

2) An example of a committed fixed cost is:

- A) management training seminars.  
**B) a long-term equipment lease.**  
 C) research and development.  
 D) advertising.

3) Within the relevant range, variable costs can be expected to:

- A) vary in total in direct proportion to changes in the activity level.**  
 B) remain constant in total as the activity level changes.  
 C) increase on a per unit basis as the activity level increases.  
 D) increase on a per unit basis as the activity level decreases.

4) Which of the following statements is true when referring to fixed costs?

- A) Committed fixed costs arise from the annual decisions by management.  
 B) As volume increases, unit fixed cost and total fixed cost will change.  
 C) Fixed costs increase in total throughout the relevant range.  
**D) Discretionary fixed costs can often be reduced to zero for short periods of time without seriously impairing the long-run goals of the company.**

5) Which costs will change with a decrease in activity within the relevant range?

- A) Total fixed costs and total variable cost.  
**B) Unit fixed costs and total variable cost.**  
 C) Unit variable cost and unit fixed cost.  
 D) Unit fixed cost and total fixed cost.

6) When the level of activity decreases within the relevant range, the fixed cost per unit will:

- A) decrease.  
**B) increase.**  
 C) remain the same.  
 D) The effect cannot be predicted.

7) Within the relevant range, a difference between variable costs and fixed costs is:

- A) variable costs per unit fluctuate and fixed costs per unit remain constant.  
**B) variable costs per unit are constant and fixed costs per unit fluctuate.**  
 C) both total variable costs and total fixed costs are constant.  
 D) both total variable costs and total fixed costs fluctuate.

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**MIXED COSTS**

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- Step variable costs:** changes when the condition changes.
- Mixed costs also called Semi variable costs or Semi fixed costs.
- The fixed portion of a mixed cost represents the minimum cost of having a service ready and available for use
- Variable portion represents the cost incurred for actual consumption of the service.

Total mixed costs >>  **$Y = a + bx$**

<b>Y</b>	<i>Total mixed cost</i>
<b>a</b>	<i>Fixed cost</i>
<b>b</b>	<i>Variable cost per unit</i>
<b>x</b>	<i>Units</i>



**8**

1) Dizzy Amusement Park is open from 8:00 am till midnight every day of the year. Dizzy charges its patrons a daily entrance fee of \$30 per person which gives them unlimited access to all of the park's 35 rides.

Dizzy gives out a free T-shirt to every 100th customer entering the park. The cost of this T-shirt would best be described as a:

- A) fixed cost
- B) mixed cost
- C) step-variable cost**
- D) true variable cost

For liability insurance, Dizzy pays a set monthly fee plus a small additional amount for every patron entering the park. The cost of liability insurance would best be described as a:

- A) fixed cost
- B) mixed cost**
- C) step-variable cost
- D) true variable cost

Dizzy employs a certified operator for each of its 35 rides. Each operator is paid \$20 per hour. The cost of the certified operators would best be described as a:

- A) fixed cost**
- B) mixed cost
- C) step-variable cost
- D) true variable cost

Dizzy donates \$2 of every entrance fee to a local homeless shelter. This charitable contribution would best be described as a:

- A) fixed cost
- B) mixed cost
- C) step-variable cost
- D) true variable cost**

2) Given the cost formula,  $Y = \$16,000 + \$3.40X$ , total cost for an activity level of 4,000 units would be:

- A) \$13,600
- B) \$3,600
- C) \$29,600**
- D) \$16,000

3) Wofril Corporation uses the cost formula  $Y = \$5,300 + \$0.60X$  for the maintenance cost, where  $X$  is machine-hours. The August budget is based on 8,000 hours of planned machine time. Maintenance cost expected to be incurred during August is:

- A) \$10,100**
- B) \$4,800
- C) \$500
- D) \$5,300

4) Timchak Corporation reports that at an activity level of 9,900 units, its total variable cost is \$919,116 and its total fixed cost is \$259,974. What would be the total cost, both fixed and variable, at an activity level of 10,100 units? Assume that this level of activity is within the relevant range.

- A) **\$1,197,658**
- B) \$1,191,000
- C) \$1,179,090
- D) \$1,202,910

6) At an activity level of 7,200 machine-hours in a month, Falks Corporation's total variable production engineering cost is \$556,416 and its total fixed production engineering cost is \$226,008. What would be the total production engineering cost per machine-hour, both fixed and variable, at an activity level of 7,300 machine-hours in a month? Assume that this level of activity is within the relevant range.

- A) \$107.93
- B) \$107.18
- C) \$108.67
- D) **\$108.24**

7) Oerther Corporation reports that at an activity level of 5,000 units, its total variable cost is \$131,750 and its total fixed cost is \$31,200.

What would be the total variable cost at an activity level of 5,200 units? Assume that this level of activity is within the relevant range.

- A) **\$137,020**
- B) \$131,750
- C) \$162,950
- D) \$32,448

What would be the average fixed cost per unit at an activity level of 5,200 units? Assume that this level of activity is within the relevant range.

- A) \$6.24
- B) **\$6.00**
- C) \$14.94
- D) \$32.59

8) At a volume of 5,000 units, Pwerson Company incurred \$32,000 in factory overhead costs, including \$14,000 in fixed costs. If volume increases to 6,000 units and both 5,000 units and 6,000 units are within the relevant range, then the company would expect to incur total factory overhead costs of:

- A) **\$35,600**
- B) \$21,600
- C) \$32,000
- D) \$18,000

9) As the level of activity increases, how will a mixed cost in total and per unit behave?

	In Total	Per Unit
A)	Increase	Decrease
B)	Increase	Increase
C)	Increase	No effect
D)	Decrease	Increase
E)	Decrease	No effect

- A) **Choice A**  
 B) Choice B  
 C) Choice C  
 D) Choice D  
 E) Choice E

10) Factory overhead is typically a(n):

- A) **mixed cost.**  
 B) fixed cost.  
 C) variable cost.  
 D) irrelevant cost.

11) The relative proportion of variable, fixed, and mixed costs in a company is known as the company's:

- A) contribution margin.  
 B) **cost structure.**  
 C) product mix.  
 D) relevant range.

12) For an automobile manufacturer, the cost of a driver's side air bag purchased from a supplier and installed in every automobile would best be described as a:

- A) fixed cost.  
 B) mixed cost.  
 C) step-variable cost.  
 D) **variable cost.**

13) A merchandising company typically will have a high proportion of which type of cost in its cost structure?

- A) **Variable.**  
 B) Fixed.  
 C) Mixed.  
 D) Step-variable.

14) In the standard cost formula  $Y = a + bX$ , what does the "Y" represent?

- A) **total cost**  
 B) total fixed cost  
 C) total variable cost

D) variable cost per unit

15) An example of a committed fixed cost would be:

- A) **taxes on real estate.**
- B) management development programs.
- C) public relations costs.
- D) advertising programs.

16) In the standard cost formula  $Y = a + bX$ , what does the "X" represent?

- A) total cost
- B) total fixed cost
- C) **the level of activity**
- D) variable cost per unit

17) One full-time clerical worker is needed for every 750 accounts receivable. The total wages of the accounts receivable clerks is an example of a:

- A) fixed cost.
- B) **step-variable cost.**
- C) mixed cost.
- D) curvilinear cost.

18) Which of the following is unlikely to be classified as a fixed cost with respect to the number of units produced and sold?

- A) Property taxes on a headquarters building.
- B) Legal department salaries.
- C) Cost of leasing the company's mainframe computer.
- D) **Production supplies.**

19) Which of the following costs could contain both variable and fixed cost elements with respect to the total output of the company?

- A) Sales commissions.
- B) **Manufacturing overhead.**
- C) Direct materials.
- D) Administrative salaries.

20) At a sales volume of 40,000 units, Lonnie Company's total fixed costs are \$40,000 and total variable costs are \$60,000. The relevant range is 30,000 to 50,000 units.

If Lonnie were to sell 50,000 units, the total expected cost per unit would be:

- A) \$2.20
- B) **\$2.30**
- C) \$2.50
- D) \$2.00

If Lonnie were to sell 42,000 units, the total expected cost would be:

- A) \$105,000
- B) \$100,000
- C) **\$103,000**
- D) \$102,000

## 9

## COST CLASSIFICATION FOR ASSIGNING COSTS TO COST OBJECTS

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1. direct cost: is a cost that can be easily and conveniently traced to a specified cost object.
2. indirect cost: is a cost that cannot be easily and conveniently traced to a specific cost object

**cost object:** is anything for which cost data are desired. like products, customers, jobs, service and organizational subunits

**common cost:** is a cost that incurred to support a number of cost objects but cannot be traced to them individually.

## COST CLASSIFICATIONS FOR DECISION MAKING

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### 1-differential cost and revenue

**differential costs:** a difference in costs between any two alternatives

incremental costs

decremental cost

differential revenue : a difference in revenues between any two alternatives

**2-opportunity cost:** is the potential benefit that is given up when one alternative is selected over another

**3-sunk cost:** is a cost that has already been incurred and that cannot be changed by any decision made now or in the future

1	Opportunity costs at a manufacturing company are not part of manufacturing overhead.	TRUE
2	Differential costs can only be variable.	FALSE
3	The potential benefit that is given up when one alternative is selected over another is called a sunk cost.	FALSE
4	The amount that a manufacturing company could earn by renting unused portions of its warehouse is an example of an opportunity cost.	TRUE
5	A cost that differs from one month to another is known as a sunk cost.	FALSE

1) A cost incurred in the past that is not relevant to any current decision is classified as a(n):

- A) period cost.
- B) opportunity cost.
- C) sunk cost.**
- D) differential cost.

2) The term that refers to costs incurred in the past that are not relevant to a decision is:

- A) marginal cost.
- B) indirect cost.
- C) period cost.
- D) sunk cost.**

3) All of the following can be differential costs except:

- A) variable costs.
- B) sunk costs.**
- C) opportunity costs.
- D) fixed costs.

4) Differential costs can:

- A) only be fixed costs.
- B) only be variable costs.
- C) be either fixed or variable.**
- D) be sunk costs.

5) Mark is an engineer who has designed a telecommunications device. He is convinced that there is a big potential market for the device. Accordingly, he has decided to quit his present job and start a company to manufacture and market the device.

The salary that Mark earns at his present employ is:

- A) a variable cost
- B) a fixed cost
- C) a product cost
- D) an opportunity cost**

6) Mark purchased a machine two years ago to make experimental boards. The machine will be used to manufacture the new board. The cost of this machine is:

- A) an opportunity cost
- B) a sunk cost**
- C) a differential cost
- D) a period cost

7) The cost of the raw materials that will be used in manufacturing the computer board is:

- A) a sunk cost
- B) a fixed cost
- C) a period cost
- D) a variable cost**

8) Rent on the administrative office space is:

- A) a variable cost
- B) an opportunity cost
- C) a period cost**
- D) a product cost

9) Property taxes on the building that will be purchased to house the manufacturing facility are:

- A) a product cost**
- B) a variable cost
- C) an opportunity cost
- D) a period cost

**10****INCOME STATEMENT**

the contribution format income statement	
Sales	XX
Variable expenses:	
Cost of goods sold	(XX)
Variable selling	(XX)
Variable administrative	(XX)
Contribution margin	XX
Fixed expenses	
Fixed selling	(XX)
Fixed administrative	(XX)
Net operating income	XX

Contribution margin: The amount remaining from sales revenues after variable expenses have been deducted



Direct material

Beg. Balance	
Purchases	Used
End. Balance	

W.I.P

Beg. balance	
DM	C.G.M
DL	
M.O.H	
End. balance	

Finished goods

Beg. Balance	
C.G.M	C.G.S
DL	
End. Balance	

$$\text{Gross margin} = \text{Sales revenue} - \text{COGS}$$

$$\text{Cost of goods sold} = \text{Beginning merchandise inventory} + \text{Purchases} - \text{Ending Merchandise inventory}$$

$$\text{COGS} = \text{COGAS} - \text{F.G}$$

$$\text{COGAS} = \text{Beg. balance of COGAS} + \text{COGM}$$

$$\text{COGM} = \text{beg. WIP} + \text{T.M.C} - \text{end WIP}$$

$$\text{T.M.C} = \text{direct cost} + \text{MOH}$$

$$\text{Direct cost} = \text{DM} + \text{DL used in production}$$

$$\text{DM used in production} = \text{Beg DM} + \text{Purchased} - \text{End DM}$$

1	In a traditional format income statement, the gross margin is sales minus cost of goods sold.	TRUE
2	In a traditional format income statement for a merchandising company, cost of goods sold is a variable cost that is included in the "Variable expenses" portion of the income statement.	FALSE
3	In a contribution format income statement for a merchandising company, the cost of goods sold reports the product costs attached to the merchandise sold during the period.	FALSE
4	Contribution format income statements are prepared primarily for external reporting purposes	FALSE
5	Contribution margin and gross margin mean the same thing.	FALSE
6	In a traditional format income statement, the gross margin minus selling and administrative expenses equals net operating income.	TRUE
7	Most companies use the contribution approach in preparing financial statements for external reporting purposes.	FALSE
8	Although the traditional format income statement is useful for external reporting purposes, it has serious limitations when used for internal purposes because it does not distinguish between fixed and variable costs.	TRUE
9	The contribution format income statement is used as an internal planning and decision-making tool. Its emphasis on cost behavior aids cost-volume-profit analysis, management performance appraisals, and budgeting.	TRUE
10	A contribution format income statement separates costs into fixed and variable categories, first deducting variable expenses from sales to obtain the contribution margin.	TRUE
11	Traditional format income statements are widely used for preparing external financial statements.	TRUE

1) Contribution margin is:

A) Sales less cost of goods sold.

**B) Sales less variable production, variable selling, and variable administrative expenses.**

C) Sales less variable production expense.

D) Sales less all variable and fixed expenses.

2) Which of the following approaches to preparing an income statement includes a calculation of the gross margin?

	Traditional Approach	Contribution Approach
A)	Yes	Yes
B)	Yes	No
C)	No	Yes
D)	No	No

A) Choice A

**B) Choice B**

C) Choice C

D) Choice D

## 11

**EX. 2-4 (FIXED AND VARIABLE COST BEHAVIOR)**

espresso express operates a number of espresso coffee stands in busy suburban malls. The fixed weekly expense of a coffee stand is \$ 1,200 and the variable cost per cup of coffee served is \$.22.

Required:

1-fill in the following table with your estimates of total costs and average cost per cup of coffee at the indicated levels of activity for a coffee stand.

	Cups of coffee served in a week		
	2,000	2,100	2,200
Fixed cost	?	?	?
Variable cost	?	?	?
Total cost	?	?	?
Average cost per cup of coffee served	?	?	?

2-does the average cost per cup of coffee served increase, decrease, or remain the same as the number of cups of coffee served in a week increases? Explain.

## E2-10 (COST BEHAVIOR; CONTRIBUTION FORMAT INCOME STATEMENT)

Parker company manufactures and sells a single product. A partially completed schedule of the company's total and per unit costs over a relevant range of 30,000 to 50,000 units produced and sold each year is given below:

	Units produced and sold		
	30,000	40,000	50,000
Total costs:			
Variable cost	180,000	?	?
Fixed cost	300,000	?	?
Total costs	480,000	?	?
Cost per unit:			
Variable cost	?	?	?
Fixed cost	?	?	?
Total cost per unit	?	?	?

required:

1-complete the schedule of the company's total and unit costs.

2-assume that the company produces and sells 45,000 units during the year at the selling price of \$16 per unit. Prepare a contribution format income statement for the year.

## Practice

1) Shelp Corporation has provided the following information:

	Cost per Unit	Cost per Period
Direct materials	\$ 7.15	
Direct labor	\$ 3.35	
Variable manufacturing overhead	\$ 1.40	
Fixed manufacturing overhead		\$ 81,000
Sales commissions	\$ 0.50	
Variable administrative expense	\$ 0.50	
Fixed selling and administrative expense		\$ 40,500

For financial reporting purposes, the total amount of period costs incurred to sell 9,000 units is closest to:

- A) \$33,000
- B) \$9,000
- C) \$40,500
- D) \$49,500**

2) At a sales volume of 20,000 units, Choice Corporation's sales commissions (a cost that is variable with respect to sales volume) total \$132,000.

To the nearest whole dollar, what should be the total sales commissions at a sales volume of 18,400 units? (Assume that this sales volume is within the relevant range.)

- A) \$126,720
- B) \$132,000
- C) \$121,440**
- D) \$143,478

To the nearest whole cent, what should be the average sales commission per unit at a sales volume of 18,500 units? (Assume that this sales volume is within the relevant range.)

- A) \$6.60**
- B) \$6.87
- C) \$7.17
- D) \$7.14

3) At a sales volume of 38,000 units, Tirri Corporation's property taxes (a cost that is fixed with respect to sales volume) total \$733,400.

To the nearest whole dollar, what should be the total property taxes at a sales volume of 37,200 units? (Assume that this sales volume is within the relevant range.)

- A) \$725,680
- B) \$733,400**
- C) \$749,172
- D) \$717,960

To the nearest whole cent, what should be the average property tax per unit at a sales volume of 37,300 units? (Assume that this sales volume is within the relevant range.)

- A) \$19.30
- B) \$19.66**
- C) \$19.72
- D) \$19.48

4) Batterson Corporation leases its corporate headquarters building. This lease cost is fixed with respect to the company's sales volume. In a recent month in which the sales volume was 28,000 units, the lease cost was \$697,200.

To the nearest whole dollar, what should be the total lease cost at a sales volume of 29,200 units in a month? (Assume that this sales volume is within the relevant range.)

- A) \$712,140
- B) \$697,200**
- C) \$727,080
- D) \$668,548

To the nearest whole cent, what should be the average lease cost per unit at a sales volume of 26,400 units in a month? (Assume that this sales volume is within the relevant range.)

- A) \$25.66
- B) \$24.90
- C) \$23.88
- D) \$26.41**

5) Leas Corporation staffs a helpline to answer questions from customers. The costs of operating the helpline are variable with respect to the number of calls in a month. At a volume of 25,000 calls in a month, the costs of operating the helpline total \$452,500.

To the nearest whole dollar, what should be the total cost of operating the helpline costs at a volume of 23,900 calls in a month? (Assume that this call volume is within the relevant range.)

- A) \$442,545
- B) \$452,500
- C) \$473,326
- D) \$432,590**

To the nearest whole cent, what should be the average cost of operating the helpline per call at a volume of 25,300 calls in a month? (Assume that this call volume is within the relevant range.)

- A) \$18.93
- B) \$18.00
- C) \$17.89
- D) \$18.10**

6) Dake Corporation's relevant range of activity is 2,000 units to 6,000 units. When it produces and sells 4,000 units, its average costs per unit are as follows:

	Average Cost per Unit
Direct materials	\$ 6.55
Direct labor	\$ 3.50
Variable manufacturing overhead	\$ 1.40
Fixed manufacturing overhead	\$ 2.60
Fixed selling expense	\$ 0.70
Fixed administrative expense	\$ 0.40
Sales commissions	\$ 1.50
Variable administrative expense	\$ 0.45

For financial reporting purposes, the total amount of product costs incurred to make 4,000 units is closest to:

- A) **\$56,200**
- B) \$45,800
- C) \$60,200
- D) \$10,400

For financial reporting purposes, the total amount of period costs incurred to sell 4,000 units is closest to:

- A) \$7,800
- B) \$8,100
- C) \$4,400
- D) **\$12,200**

If 3,000 units are produced, the total amount of direct manufacturing cost incurred is closest to:

- A) **\$30,150**
- B) \$34,350
- C) \$42,150
- D) \$34,650

If 3,000 units are produced, the total amount of indirect manufacturing cost incurred is closest to:

- A) \$4,200
- B) \$10,400
- C) **\$14,600**
- D) \$12,000

7) Rhome Corporation's relevant range of activity is 2,000 units to 6,000 units. When it produces and sells 4,000 units, its average costs per unit are as follows:

	Average Cost per Unit
Direct materials	\$ 5.40
Direct labor	\$ 3.55
Variable manufacturing overhead	\$ 1.70
Fixed manufacturing overhead	\$ 3.00
Fixed selling expense	\$ 0.60
Fixed administrative expense	\$ 0.40
Sales commissions	\$ 1.00
Variable administrative expense	\$ 0.40

If 5,000 units are sold, the variable cost per unit sold is closest to:

- A) \$13.65
- B) \$10.65
- C) \$16.05
- D) \$12.05**

If 5,000 units are sold, the total variable cost is closest to:

- A) \$53,250
- B) \$68,250
- C) \$80,250
- D) \$60,250**

If 5,000 units are produced, the average fixed manufacturing cost per unit produced is closest to:

- A) \$3.75
- B) \$2.40**
- C) \$2.70
- D) \$3.00

If 5,000 units are produced, the total amount of fixed manufacturing cost incurred is closest to:

- A) \$13,500
- B) \$18,000
- C) \$12,000**
- D) \$15,000

If 5,000 units are produced, the total amount of manufacturing overhead cost is closest to:

- A) \$20,500**
- B) \$23,000
- C) \$18,000
- D) \$19,250



8) Lambeth Corporation has provided the following information:

	Cost per Unit	Cost per Period
Direct materials	\$ 4.90	
Direct labor	\$ 2.95	
Variable manufacturing overhead	\$ 1.25	
Fixed manufacturing overhead		\$ 8,000
Sales commissions	\$ 1.00	
Variable administrative expense	\$ 0.40	
Fixed selling and administrative expense		\$ 4,000

If 3,000 units are produced, the total amount of direct manufacturing cost incurred is closest to:

- A) \$26,550
- B) \$23,550**
- C) \$33,300
- D) \$27,300

If 3,000 units are produced, the total amount of indirect manufacturing cost incurred is closest to:

- A) \$8,000
- B) \$11,750**
- C) \$9,750
- D) \$3,750

9) The following data pertains to activity and costs for two months:

	June	July
Activity level in units	10,000	11,000
Direct materials	\$17,000	\$ ?
Fixed factory rent	21,000	?
Manufacturing overhead	20,000	?
Total cost	\$58,000	\$61,300

Assuming that these activity levels are within the relevant range, the manufacturing overhead for July was:

- A) \$21,600**
- B) \$20,000
- C) \$22,000
- D) \$19,500

10) At an activity level of 8,400 units in a month, Braughton Corporation's total variable maintenance and repair cost is \$697,284 and its total fixed maintenance and repair cost is \$464,100. What would be the total maintenance and repair cost, both fixed and variable, at an activity level of 8,500 units in a month? Assume that this level of activity is within the relevant range.

- A) \$1,175,210
- B) \$1,169,685**
- C) \$1,161,384
- D) \$1,168,297

11) Lagle Corporation has provided the following information:

	Cost per Unit	Cost per Period
Direct materials	\$ 4.85	
Direct labor	\$ 3.35	
Variable manufacturing overhead	\$ 1.35	
Fixed manufacturing overhead		\$ 8,000
Sales commissions	\$ 1.50	
Variable administrative expense	\$ 0.45	
Fixed selling and administrative expense		\$ 4,400

For financial reporting purposes, the total amount of product costs incurred to make 4,000 units is closest to:

- A) \$46,200**
- B) \$38,200
- C) \$8,000
- D) \$50,200

For financial reporting purposes, the total amount of period costs incurred to sell 4,000 units is closest to:

- A) \$12,200**
- B) \$7,800
- C) \$4,400
- D) \$8,100

If 5,000 units are sold, the variable cost per unit sold is closest to:

- A) \$14.60
- B) \$11.50**
- C) \$9.55
- D) \$11.55

If 5,000 units are sold, the total variable cost is closest to:

- A) \$47,750
- B) \$73,000
- C) \$57,500**
- D) \$57,750

12) Sparacino Corporation has provided the following information:

	Cost per Unit	Cost per Period
Direct materials	\$ 6.90	
Direct labor	\$ 3.90	
Variable manufacturing overhead	\$ 1.70	
Fixed manufacturing overhead		\$ 25,200
Sales commissions	\$ 1.50	
Variable administrative expense	\$ 0.55	
Fixed selling and administrative expense		\$ 8,100

If 5,000 units are produced, the total amount of manufacturing overhead cost is closest to:

- A) \$24,750
- B) \$42,650
- C) \$33,700**
- D) \$29,225

13) Comparative income statements for Boggs Sports Equipment Company for the last two months are presented below:

	July	August
Sales in units	11,000	10,000
Sales	\$ 165,000	\$ 150,000
Cost of goods sold	72,600	66,000
Gross margin	92,400	84,000
Selling and administrative expenses:		
Rent	\$ 12,000	\$ 12,000
Sales commissions	\$ 13,200	\$ 12,000
Maintenance expenses	\$ 13,500	\$ 13,000
Clerical expense	\$ 16,000	\$ 15,000
Total selling and administrative expenses	\$ 54,700	\$ 52,000
Net operating income	\$ 37,700	\$ 32,000

All of the company's costs are either fixed, variable, or a mixture of the two (i.e., mixed). Assume that the relevant range includes all of the activity levels mentioned in this problem.

Which of the selling and administrative expenses of the company is variable?

- A) Rent
- B) Sales Commissions**
- C) Maintenance Expense
- D) Clerical Expense

14) Brault Corporation has provided the following information:

	Cost per Unit	Cost per Period
Direct materials	\$ 6.85	
Direct labor	\$ 3.85	
Variable manufacturing overhead	\$ 1.25	
Fixed manufacturing overhead		\$ 97,200
Sales commissions	\$ 1.00	
Variable administrative expense	\$ 0.55	
Fixed selling and administrative expense		\$ 40,500

If 10,000 units are sold, the variable cost per unit sold is closest to:

- A) \$22.75
- B) \$11.95
- C) \$13.50**
- D) \$28.80

15) Fiori Corporation's relevant range of activity is 3,000 units to 7,000 units. When it produces and sells 5,000 units, its average costs per unit are as follows:

	Average Cost per Unit
Direct materials	\$ 6.05
Direct labor	\$ 3.05
Variable manufacturing overhead	\$ 1.70
Fixed manufacturing overhead	\$ 3.00
Fixed selling expense	\$ 0.50
Fixed administrative expense	\$ 0.40
Sales commissions	\$ 1.00
Variable administrative expense	\$ 0.50

The incremental manufacturing cost that the company will incur if it increases production from 5,000 to 5,001 units is closest to:

- A) \$16.20
- B) \$10.80**
- C) \$13.80
- D) \$14.30

16) Kesterson Corporation has provided the following information:

	Cost per Unit	Cost per Period
Direct materials	\$ 6.20	
Direct labor	\$ 3.10	
Variable manufacturing overhead	\$ 1.35	
Fixed manufacturing overhead		\$ 14,000
Sales commissions	\$ 1.50	
Variable administrative expense	\$ 0.40	
Fixed selling and administrative expense		\$ 4,500

If 4,000 units are produced, the total amount of manufacturing overhead cost is closest to:

- A) \$16,300
- B) \$25,600
- C) \$19,400**
- D) \$13,200

If the selling price is \$21.90 per unit, the contribution margin per unit sold is closest to:

- A) \$9.35**
- B) \$12.60
- C) \$8.45
- D) \$5.65

If 6,000 units are produced, the total amount of direct manufacturing cost incurred is closest to:

- A) \$55,800**
- B) \$63,900
- C) \$80,700
- D) \$64,800

If 6,000 units are produced, the total amount of indirect manufacturing cost incurred is closest to:

- A) \$8,100
- B) \$24,900
- C) \$22,100**
- D) \$14,000

The incremental manufacturing cost that the company will incur if it increases production from 5,000 to 5,001 units is closest to:

- A) \$10.65**
- B) \$13.45
- C) \$16.25
- D) \$13.95

17) Dominik Corporation purchased a machine 5 years ago for \$527,000 when it launched product M08Y. Unfortunately, this machine has broken down and cannot be repaired. The machine could be replaced by a new model 310 machine costing \$545,000 or by a new model 240 machine costing \$450,000. Management has decided to buy the model 240 machine. It has less capacity than the model 310 machine, but its capacity is sufficient to continue making product M08Y. Management also considered, but rejected, the alternative of dropping product M08Y and not replacing the old machine. If that were done, the \$450,000 invested in the new machine could instead have been invested in a project that would have returned a total of \$532,000.

In making the decision to buy the model 240 machine rather than the model 310 machine, the differential cost was:

- A) **\$95,000**
- B) \$5,000
- C) \$77,000
- D) \$18,000

In making the decision to buy the model 240 machine rather than the model 310 machine, the sunk cost was:

- A) \$545,000
- B) \$450,000
- C) **\$527,000**
- D) \$532,000

In making the decision to invest in the model 240 machine, the opportunity cost was:

- A) \$545,000
- B) \$450,000
- C) **\$532,000**
- D) \$527,000

18) Tirri Corporation has provided the following information:

	Cost per Unit	Cost per Period
Direct materials	\$ 6.85	
Direct labor	\$ 3.90	
Variable manufacturing overhead	\$ 1.25	
Fixed manufacturing overhead		\$ 22,500
Sales commissions	\$ 1.00	
Variable administrative expense	\$ 0.55	
Fixed selling and administrative expense		\$ 7,500

If the selling price is \$26.20 per unit, the contribution margin per unit sold is closest to:

- A) **\$12.65**
- B) \$6.65
- C) \$15.45
- D) \$9.70

19) Macy Corporation's relevant range of activity is 4,000 units to 8,000 units. When it produces and sells 6,000 units, its average costs per unit are as follows:

	Average Cost per Unit
Direct materials	\$ 4.95
Direct labor	\$ 3.25
Variable manufacturing overhead	\$ 1.45
Fixed manufacturing overhead	\$ 4.20
Fixed selling expense	\$ 1.05
Fixed administrative expense	\$ 0.60
Sales commissions	\$ 1.00
Variable administrative expense	\$ 0.50

If the selling price is \$23.50 per unit, the contribution margin per unit sold is closest to:

- A) \$9.65
- B) \$6.50
- C) \$15.30
- D) \$12.35**

20) Bellucci Corporation has provided the following information:

	Cost per Unit	Cost per Period
Direct materials	\$ 7.10	
Direct labor	\$ 3.95	
Variable manufacturing overhead	\$ 1.75	
Fixed manufacturing overhead		\$ 105,300
Sales commissions	\$ 1.00	
Variable administrative expense	\$ 0.50	
Fixed selling and administrative expense		\$ 36,450

The incremental manufacturing cost that the company will incur if it increases production from 9,000 to 9,001 units is closest to:

- A) \$26.75
- B) \$12.80**
- C) \$30.05
- D) \$24.50

21) Haack Inc. is a merchandising company. Last month the company's cost of goods sold was \$84,000. The company's beginning merchandise inventory was \$20,000 and its ending merchandise inventory was \$18,000. What was the total amount of the company's merchandise purchases for the month?

- A) \$86,000
- B) \$82,000**
- C) \$84,000
- D) \$122,000

22) Gabel Inc. is a merchandising company. Last month the company's merchandise purchases totaled \$63,000. The company's beginning merchandise inventory was \$13,000 and its ending merchandise inventory was \$15,000. What was the company's cost of goods sold for the month?

- A) \$91,000
- B) \$63,000
- C) \$65,000
- D) \$61,000**

23) Kogler Corporation's relevant range of activity is 7,000 units to 11,000 units. When it produces and sells 9,000 units, its average costs per unit are as follows:

	Average Cost per Unit
Direct materials	\$ 4.85
Direct labor	\$ 4.20
Variable manufacturing overhead	\$ 1.55
Fixed manufacturing overhead	\$ 9.00
Fixed selling expense	\$ 3.15
Fixed administrative expense	\$ 1.80
Sales commissions	\$ 0.50
Variable administrative expense	\$ 0.45

If the selling price is \$25.00 per unit, the contribution margin per unit sold is closest to:

- A) \$13.45**
- B) (\$0.50)
- C) \$5.40
- D) \$15.95

The incremental manufacturing cost that the company will incur if it increases production from 9,000 to 9,001 units is closest to:

- A) \$10.60**
- B) \$22.75
- C) \$19.60
- D) \$25.50



24) Schwiesow Corporation has provided the following information:

	Cost per Unit	Cost per Period
Direct materials	\$ 7.05	
Direct labor	\$ 3.50	
Variable manufacturing overhead	\$ 1.65	
Fixed manufacturing overhead		\$ 11,000
Sales commissions	\$ 1.00	
Variable administrative expense	\$ 0.40	
Fixed selling and administrative expense		\$ 5,500

For financial reporting purposes, the total amount of product costs incurred to make 5,000 units is closest to:

- A) **\$72,000**
- B) \$77,000
- C) \$11,000
- D) \$61,000

For financial reporting purposes, the total amount of period costs incurred to sell 5,000 units is closest to:

- A) **\$12,500**
- B) \$8,300
- C) \$7,000
- D) \$5,500

If 4,000 units are sold, the variable cost per unit sold is closest to:

- A) **\$13.60**
- B) \$12.20
- C) \$14.40
- D) \$16.90

If 4,000 units are sold, the total variable cost is closest to:

- A) **\$54,400**
- B) \$48,800
- C) \$57,600
- D) \$67,600

If 4,000 units are produced, the total amount of manufacturing overhead cost is closest to:

- A) \$14,600
- B) **\$17,600**
- C) \$11,600
- D) \$23,600

If the selling price is \$18.70 per unit, the contribution margin per unit sold is closest to:

- A) **\$5.10**
- B) \$1.80
- C) \$4.30
- D) \$8.15

If 6,000 units are produced, the total amount of direct manufacturing cost incurred is closest to:

- A) \$73,200
- B) \$69,300
- C) \$86,400
- D) **\$63,300**

If 6,000 units are produced, the total amount of indirect manufacturing cost incurred is closest to:

- A) \$23,100
- B) \$9,900
- C) \$11,000
- D) **\$20,900**

The incremental manufacturing cost that the company will incur if it increases production from 5,000 to 5,001 units is closest to:

- A) \$14.40
- B) \$15.10
- C) \$16.90
- D) **\$12.20**

25) Pedregon Corporation has provided the following information:

	Cost per Unit	Cost per Period
Direct materials	\$ 6.35	
Direct labor	\$ 3.75	
Variable manufacturing overhead	\$ 1.50	
Fixed manufacturing overhead		\$ 15,000
Sales commissions	\$ 0.50	
Variable administrative expense	\$ 0.55	
Fixed selling and administrative expense		\$ 4,500

If 4,000 units are sold, the variable cost per unit sold is closest to:

- A) \$16.55
- B) \$11.60
- C) \$12.65**
- D) \$14.60

If 4,000 units are sold, the total variable cost is closest to:

- A) \$58,400
- B) \$66,200
- C) \$50,600**
- D) \$46,400

If 4,000 units are produced, the total amount of manufacturing overhead cost is closest to:

- A) \$21,000**
- B) \$14,000
- C) \$28,000
- D) \$17,500

If the selling price is \$20.60 per unit, the contribution margin per unit sold is closest to:

- A) \$4.05
- B) \$6.00
- C) \$7.95**
- D) \$10.50

26) The University Store, Inc. is the major bookseller for four nearby colleges. An income statement for the first quarter of the year is presented below:

University Store, Inc. Income Statement For the Quarter Ended March 31		
Sales		\$ 800,000
Cost of goods sold		560,000
Gross margin		240,000
Selling and administrative expenses		
Selling	\$ 100,000	
Administration	110,000	210,000
Net operating income		\$ 30,000

On average, a book sells for \$40.00. Variable selling expenses are \$3.00 per book; the remaining selling expenses are fixed. The variable administrative expenses are 5% of sales; the remainder of the administrative expenses are fixed.

The contribution margin for the University Store for the first quarter is:

- A) \$660,000
- B) \$700,000
- C) \$180,000
- D) \$140,000**

The net operating income computed using the contribution approach for the first quarter is:

- A) \$30,000**
- B) \$180,000
- C) \$140,000
- D) \$0

The cost formula for selling and administrative expenses with "X" equal to the number of books sold is:

- A)  $Y = \$105,000 + \$3X$
- B)  $Y = \$105,000 + \$5X$
- C)  $Y = \$110,000 + \$5X$**
- D)  $Y = \$110,000 + \$33X$

If 25,000 books are sold during the second quarter and this activity is within the relevant range, the company's expected contribution margin would be:

- A) \$875,000
- B) \$300,000
- C) \$175,000**
- D) \$65,000

27) Bolka Corporation, a merchandising company, reported the following results for October:

Sales	\$	4,096,400
Cost of goods sold (all variable)	\$	2,194,500
Total variable selling expense	\$	238,700
Total fixed selling expense	\$	144,700
Total variable administrative expense	\$	238,700
Total fixed administrative expense	\$	282,900

The gross margin for October is:

- A) \$1,424,500
- B) \$1,901,900**
- C) \$996,900
- D) \$3,668,800

The contribution margin for October is:

- A) \$1,424,500**
- B) \$3,191,400
- C) \$1,901,900
- D) \$996,900

28) Streif Inc., a local retailer, has provided the following data for the month of June:

Merchandise inventory, beginning balance	\$	46,000
Merchandise inventory, ending balance	\$	52,000
Sales	\$	260,000
Purchases of merchandise inventory	\$	128,000
Selling expense	\$	13,000
Administrative expense	\$	40,000

The cost of goods sold for June was:

- A) \$128,000
- B) \$181,000
- C) \$122,000**
- D) \$134,000

The net operating income for June was:

- A) \$132,000
- B) \$126,000
- C) \$85,000**
- D) \$79,000

29) Boersma Sales, Inc., a merchandising company, reported sales of 7,100 units in September at a selling price of \$682 per unit. Cost of goods sold, which is a variable cost, was \$317 per unit. Variable selling expenses were \$44 per unit and variable administrative expenses were \$22 per unit. The total fixed selling expenses were \$157,200 and the total administrative expenses were \$338,000.

The contribution margin for September was:

- A) \$3,878,400
- B) \$2,122,900**
- C) \$2,591,500
- D) \$1,627,700

The gross margin for September was:

- A) \$2,122,900
- B) \$2,591,500**
- C) \$1,627,700
- D) \$4,347,000

30) Salomon Marketing, Inc., a merchandising company, reported sales of \$1,555,500 and cost of goods sold of \$1,025,100 for December. The company's total variable selling expense was \$96,900; its total fixed selling expense was \$34,300; its total variable administrative expense was \$71,400; and its total fixed administrative expense was \$100,100. The cost of goods sold in this company is a variable cost.

The contribution margin for December is:

- A) \$530,400
- B) \$227,700
- C) \$1,252,800
- D) \$362,100**

The gross margin for December is:

- A) \$530,400**
- B) \$227,700
- C) \$362,100
- D) \$1,421,100

31) Delongis Corporation, a merchandising company, reported the following results for June:

Number of units sold	\$	1,200Units
Selling price per unit	\$	221per unit
Unit cost of goods sold	\$	97per unit
Variable selling expense per unit		12per unit
Total fixed selling expense	\$	7,300
Variable administrative expense per unit	\$	8per unit
Total fixed administrative expense	\$	15,300

The gross margin for June is:

- A) \$242,600
- B) \$148,800**
- C) \$124,800
- D) \$102,200

The contribution margin for June is:

- A) \$148,800
- B) \$102,200
- C) \$218,600
- D) \$124,800**

32) At an activity level of 6,800 units, Henkes Corporation's total variable cost is \$125,188 and its total fixed cost is \$164,152.

**Required:**

For the activity level of 7,100 units, compute: (a) the total variable cost; (b) the total fixed cost; (c) the total cost; (d) the average variable cost per unit; (e) the average fixed cost per unit; and (f) the average total cost per unit. Assume that this activity level is within the relevant range.

Answer: Variable cost =  $\$125,188 \div 6,800 \text{ units} = \$18.41 \text{ per unit}$

Activity level	\$	7,100
Total cost:		
Variable cost (a) [7,100 units × \$18.41 per unit]		130,711
Fixed cost (b)		164,152
Total (c)	\$	<u>294,863</u>
Cost per unit:		
Variable cost (d)	\$	18.41
Fixed cost (e) [ $\$164,152 \div 7,100 \text{ units}$ ]		23.12
Total (f)	\$	<u>41.53</u>

*THE END*  
*Good luck*