Cost Accounting
Chapter 10
Determining How Costs Behave

Answer the Following Questions

1) Bennet Company employs 20 individuals. Eighteen employees are paid $18 per hour and the rest are salaried employees paid $3,000 a month. Which of the following is the total cost function of personnel?
A) y = a + bX   B) y = b   C) y = bX   D) y = a

2) For February, the cost components of a picture frame include $0.30 for the glass, $0.75 for the wooden frame, and $0.80 for assembly. The assembly desk and tools cost $500. Two hundred fifty frames are expected to be produced in the coming year. What cost function best represents these costs?
A) $y = 1.85 + 500X$
B) $y = 500 + 1.85X$
C) $y = 3.85 + 600X$
D) $y = 1.05 + 500X$

3) Which of the following statements is true of a linear cost function?
A) It presents variable cost as a slope coefficient.
B) It presents total cost as an intercept.
C) It presents variable cost as an intercept.
D) It presents total cost as slope coefficient.

4) The cost function y = 2,000 + 6X _____.
A) has a slope coefficient of 2,000
B) has an intercept of 6
C) is a straight line
D) represents a fixed cost

5) The cost function y = 10,000 + 3X _____.
A) represents a mixed cost
B) will intersect the y-axis at 3
C) has a slope coefficient of 10,000
D) is a curved line

6) Write a linear cost function equation for each of the following conditions. Use y for estimated costs and X for activity of the cost driver.
a.   Direct manufacturing labor is $10 per hour.
b.   Direct materials cost $15.60 per cubic yard.
c.   Utilities have a minimum charge of $5,000, plus a charge of $0.30 per kilowatt-hour.
d.   Machine operating costs include $300,000 of machine depreciation per year, plus $100 of utility costs for each day the machinery is in operation.

7) Variable cost per labor-hour is $8.50. Fixed cost is $10,500. Calculate the total cost for 350 labor hours. Machine hours during the period are 50.
A) $10,925
B) $13,475
C) $13,900

D) $3,400

Isondo's TV and Appliance Store is a small company that has hired you to perform some management advisory services. The following information pertains to 2015 operations.

Sales (1,200 televisions)	$ 1,200,000
Cost of goods sold (Variable)	540,000
Store manager's salary per year	108,000
Operating costs per year	216,000
Advertising and promotion per year	24,000
Commissions (3% of sales)	36,000

8) What was the variable cost per unit sold for 2015?
A) $30
B) $480
C) $770
D) $450

9) What were total fixed costs for 2015?
A) $924,000
B) $576,000
C) $348,000
D) $224,000

10) What are the estimated total costs if the company expects to sell 3,500 units next year?
A) $2,028,000
B) $3,619,000
C) $3,271,000
D) $1,429,000

Answer the following questions using the information below:

Uninder Company uses the high-low method to estimate the cost function. The information for 2015 is provided below:

	Machine-hours	Labor Costs
Highest observation of cost driver	550	$22,000
Lowest observation of cost driver	250	$ 13,000

11) What is the slope coefficient?
A) $52.00
B) $43.75
C) $30.00
D) $40.00

12) What is the constant for the estimated cost equation?
A) $5,500
B) $13,000
C) $16,500

D) $22,000

13) What is the estimated cost function for the above data?
A) y = 13,000 + 43.75X
B) y = 5,500 + 30X
C) y = 22,000 + 40X
D) y = 16,500 + 52X

14) What is the estimated total cost when 400 machine-hours are used?
A) $20,800
B) $29,000
C) $16,000
D) $17,500

The Frontive Company has assembled the following data pertaining to certain costs that cannot be easily identified as either fixed or variable. Frontive Company has heard about a method of measuring cost functions called the high-low method and has decided to use it in this situation.

Cost	Hours
$24,700	5,000
26,000	5,500
34,000	7,500
45,370	10,300
38,000	9,500

15) What is the cost function?
A) y = $45,370 + $4.19X
B) y = $24,700 + $4.40X
C) y = $34,000 + $4.94X
D) y = $5,200 + $3.90X

19) What is the estimated total cost at an operating level of 9,000 hours?
A) $35,100
B) $40,300
C) $44,460
D) $39,644

16) The managers of the production department have decided to use the production levels of 2015 and 2016 as examples of the highest and lowest years of operating levels. Data for those years are as follows:

Year	Chemicals used	Overhead Costs
2015	336,000 gallons	$292,800
2016	288,000 gallons	$254,400

Required:
What is the cost estimating equation for the department if gallons of chemicals are used as the cost driver?

17) The Bover Company has provided the following information:

Units of Output	33,000 Units	46,200 Units
Direct materials	$ 316,800	$ 443,520
Workers' wages	1,188,000	1,663,200
Supervisors' salaries	343,200	343,200
Equipment depreciation	166,320	166,320
Maintenance	89,760	121,440
Utilities	422,400	580,800
Total	$2,526,480	$3,318,480

Using the high-low method and the information provided above,
a. identify the linear cost function equation and
b. estimate the total cost at 38,000 units of output.

18) As part of his job as cost analyst, Max Thompson collected the following information concerning the operations of the Machining Department:

Observation	Machine-hours	Total Operating Costs
January	4,700	$43,000
February	5,060	45,395
March	4,180	42,535
April	4,500	43,600
May	4,250	42,890

Required:
a. Use the high-low method to determine the estimating cost function with machine-hours as the cost driver.
b. If June's estimated machine-hours are 4,300, calculate the total estimated costs of the Machining Department?