

Question 1

Select the graph that matches the numbered manufacturing cost data. Indicate by letter which of the graphs best fits each of the situations or items described.

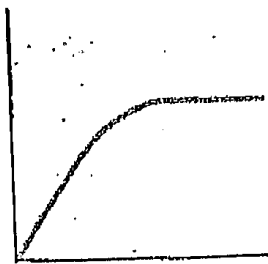
The vertical axes of the graphs represent total dollars of cost, and the horizontal axes represent production output during a calendar year. In each case, the zero point of dollars and production is at the intersection of the two axes. The graphs may be used more than once.

1. Annual depreciation of equipment, where the amount of depreciation charged is computed by the machine-hours method.
2. Electricity bill – a flat fixed charge, plus a variable cost after a certain number of kilowatt-hours are used, where the quantity of kilowatt-hours used varies proportionately with the quantity of production output.
3. City water bill which is computed as follows:

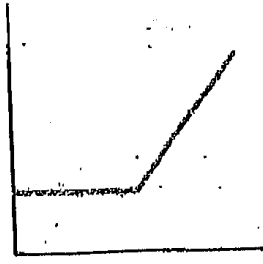
First 1,000,000 or less	\$1,000 flat fee
Next 10,000 litres	\$0.003 per litre used
Next 10,000 litres	\$0.006 per litre used
Next 10,000 litres	\$0.009 per litre used
And so on	And so on

The litres of water used vary proportionately with the quantity of production output.

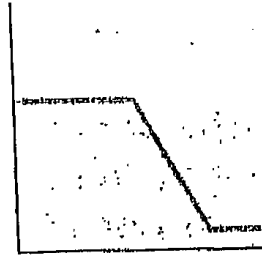
4. Cost of lubricant for machines, where cost per unit decreases with each kilogram of lubricant used (for example, if one kilogram is used, the cost is \$10; if two kilograms are used, the cost is \$19.98; if three kilograms are used, the cost is \$29.94) with a minimum cost per kilogram of \$9.20.
5. Annual depreciation of equipment, where the amount is computed by the straight-line method. When the depreciation rate was established, it was anticipated that the obsolescence factor would be greater than the wear-and-tear factor.
6. Rent on a manufacturing plant donated by the city, where the agreement calls for a fixed fee payment unless 200,000 labour-hours are worked, in which case no rent need be paid.
7. Salaries of a repair personnel, where one person is needed for every 1,000 machine-hours or less (that is, 0 to 1,000 hours requires one person; 1,001 to 2,000 hours requires two people, etc.).
8. Cost of direct materials used (assume no quantity discounts).
9. Rent on a manufacturing plant donated by the county, where the agreement calls for rent of \$100,000 reduced by \$1 for each direct manufacturing labour-hour worked in excess of 200,000 hours, but a minimum rental fee of \$20,000 must be paid.



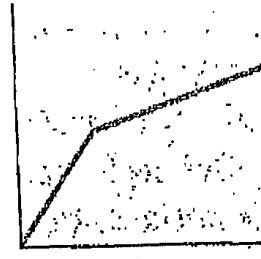
A



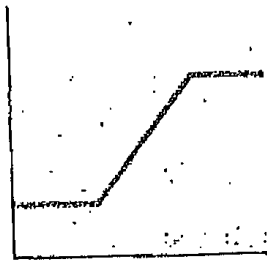
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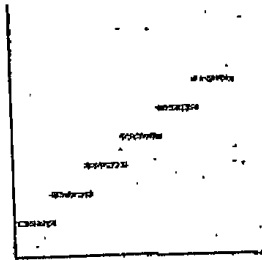
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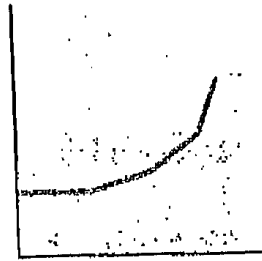
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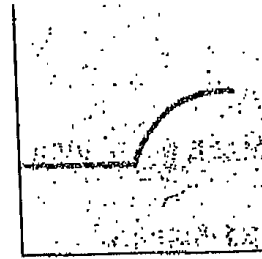
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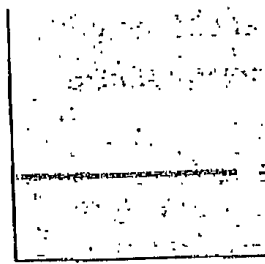
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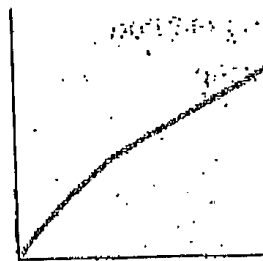
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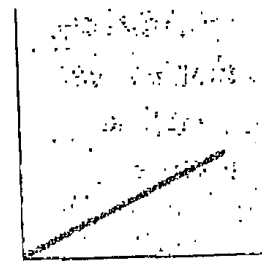
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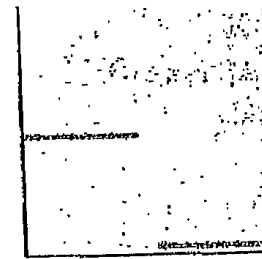
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J



K



L

Question 2

Randy Smith is paid \$40 an hour for straight-time and \$60 an hour for overtime. One week he worked 50 hours, which included 40 hours of regular time and 10 hours of overtime. The total amount of labor cost paid to Randy for his work during that week was \$2,200.

The 10 hours of overtime include: 4 hours due to idle time caused by material shortages; 4 hours due to bad scheduling; and 2 hours caused by a special request from a customer who made a late order. How much of the total amount paid to Randy is assigned as *direct labour* and how much is assigned as *indirect labour* (i.e., manufacturing overhead)?

Multiple Choice Questions

1. Consider the following for Franklin Street Manufacturing:

Change in finished goods inventory	\$685 increase
Change in work-in-process inventory	\$350 decrease
Total manufacturing costs	\$900

What are the cost of goods manufactured and cost of goods sold?

- a. \$ 885, \$1,050
- b. \$1,100, \$1,100
- c. \$1,525, \$ 925
- d. \$1,250, \$ 565

2. Bread Co. incurred the following costs during the year:

Conversion costs	\$133,000
Prime costs	\$120,000
Manufacturing overhead	\$ 75,000

What was the amount of direct materials used and direct labor for the year?

- a. \$43,000, \$47,000
- b. \$62,000, \$58,000
- c. \$47,000, \$43,000
- d. \$58,000, \$45,000

3. Factory overhead costs for this period were 3 times as much as the direct material costs. Prime costs totaled \$2,000. Conversion costs totaled \$3,280. What are the direct labor costs for the period?

- a. \$1,220
- b. \$1,360
- c. \$1,410
- d. \$1,540

Use the following information to answer the next two questions

Axle and Wheel Manufacturing currently produces 1,000 axles per month. The following per-unit data apply for sales to regular customers:

Direct materials	\$30
Direct manufacturing labor	5
Variable manufacturing overhead	10
Fixed manufacturing overhead	40
Total manufacturing costs	85

The plant has capacity for 2,000 axles and is considering expanding production to 1,500 axles.

4. What is the total cost of producing 1,500 axles?
 - a. \$85,000
 - b. \$170,000
 - c. \$107,500
 - d. \$102,500

5. What is the per unit cost when producing 1,500 axles?
 - a. \$71.67
 - b. \$107.50
 - c. \$85.00
 - d. \$170.00

6. In April direct labor was 70% percent of conversion cost. If the manufacturing overhead cost for the month was \$42,000 and the direct materials cost was \$28,000, the direct labor cost was:
 - a. \$98,000
 - b. \$65,333
 - c. \$18,000
 - d. \$12,000

7. Last month a manufacturing company had the following operating results:

Beginning finished goods inventory	\$84,000
Ending finished goods inventory	\$71,000
Sales	\$505,000
Gross margin	\$63,000

What was the cost of goods manufactured for the month?

- a. \$492,000
- b. \$442,000
- c. \$429,000
- d. \$455,000