

Practice B

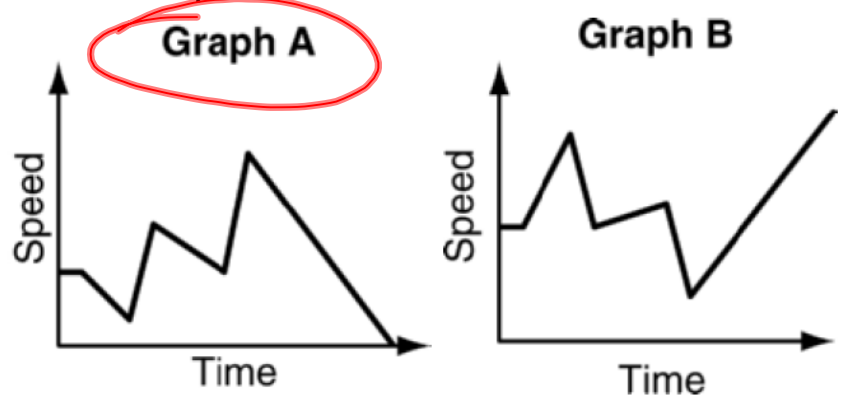
1. arithmetic; $d = 3$; 2, 5, 8
2. arithmetic; $d = 1.5$; 6, 7.5, 9
3. not arithmetic
4. arithmetic; $d = -0.5$; -22, -22.5, 23
5. -108
6. 23
7. 97.8
8. -60.8
9. -34.5
10. 73.8
11. \$213.40
12. \$25.00

$$\frac{21-x}{21}$$

1. 1430
2. 1.95 or.
3. 9400
4. 2.75
5. D
6. J
7. A
8. J
9. B

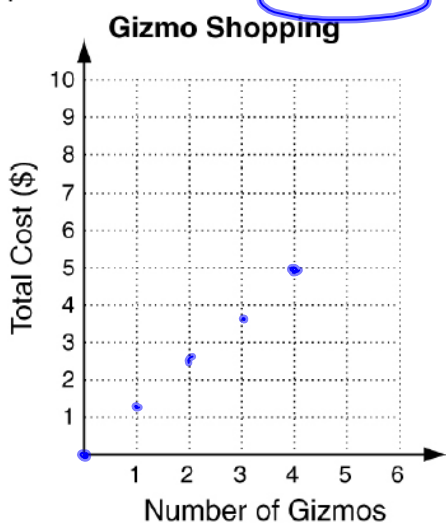
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1. A roller coaster leave the boarding area at a steady speed. It moves slowly as it climbs and increases speed as it descends before coming to a stop at the end of the ride. Choose the graph that best represents this situation.



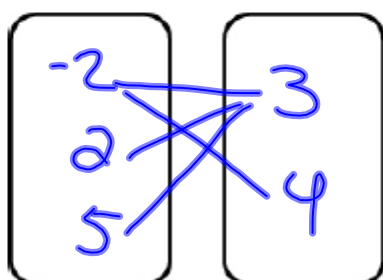
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2. A gizmo sells for \$1.25. Sketch a graph to show the total cost if a customer buys 0, 1, 2, 3, or 4 gizmos. Tell whether the graph is continuous or discrete.



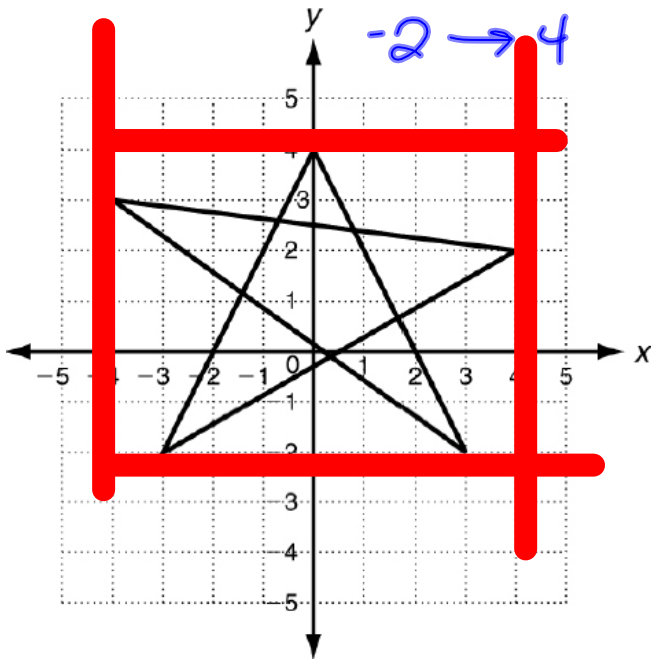
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3. Express the relation $\{(-2, 3), (2, 3), (5, 3), (-2, 4)\}$ as a mapping diagram.



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4. Give the range of the relation.



$D: -4 \leq x \leq 4$
 $R: -2 \leq y \leq 4$

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5. Give the domain of the relation.

x	-2	-1	0	3.5	4.2
y	2	2.1	5.1	5.5	6.0

$\{x \mid x = -2, -1, 0, 3.5, 4.2\}$

6. Tell whether the relation is a function.

Explain.

$\{(-4, 0), (-3, 0), (-2, 1), (1, -2), (-3, 4)\}$

No

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7. Determine a relationship between the x- and y-values. Write an equation.

x	0	1	2	3	4
y	1	2	5	10	17

Change y $x^2 = 1$ $x^2 + 1$ $2^2 + 1$
 Change x $0^2 = 1$ $1^2 + 1 = 2$ $4 + 1 = 5$
 $x^2 + 1$

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8. The cost of membership is \$21 plus \$5.50 each month.

$21 + 5.5m$

9. Sales tax is 7% of the total price.

$.07(p)$

10. Evaluate the function $f(x) = \frac{|1-x|}{2} + 2$

when $x = 0$ and when $x = -3$.

$f(0) = 2.5$ $f(-3) = 4$

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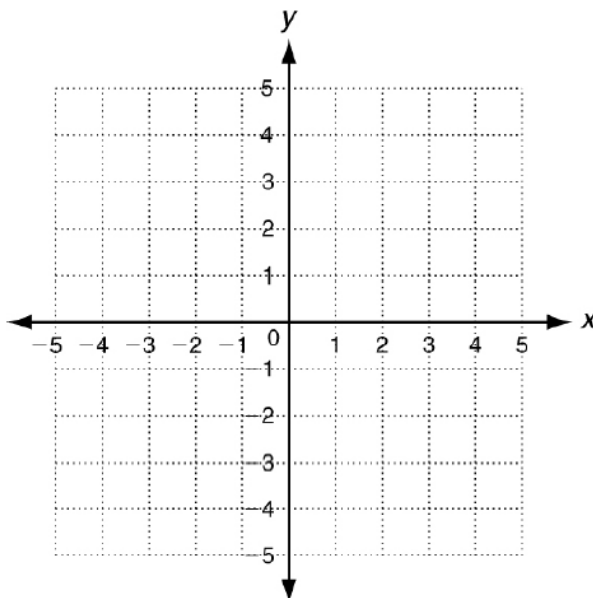
11. Identify the independent and dependent variables.

The essay instructions were to write three facts about each person listed.

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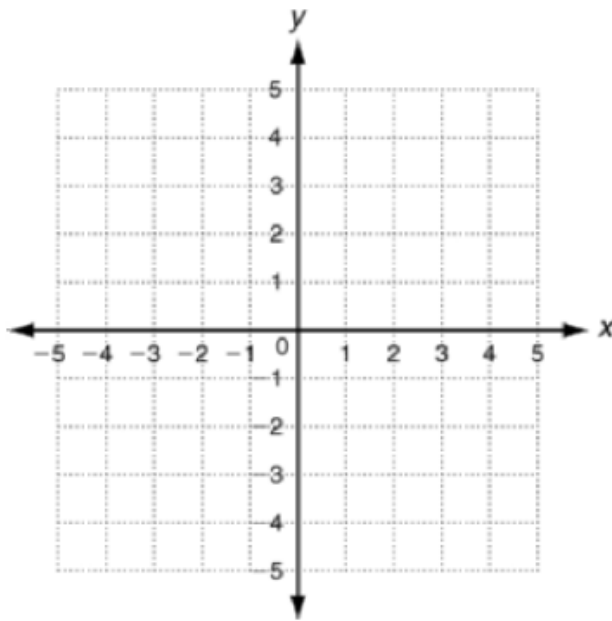
Graph each function.

12. $y = \frac{x^2}{2} - 3$; D: $\{-4, -2, 0, 2\}$



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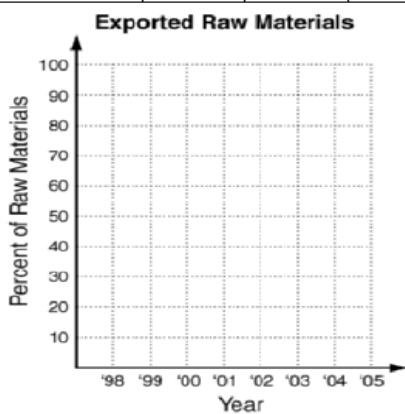
13. $f(x) = |3 - x| + 1$



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14. The table shows the percent of raw materials exported over a four year period. Draw a scatter plot and trend line.

Year	'98	'99	'00	'01
Raw Materials	60%	52%	54%	48%



Based on the trend line, predict the percent of raw materials exported in 2004.

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15. Find the next three terms of the

arithmetic sequence $\frac{1}{8}, \frac{1}{4}, \frac{3}{8}, \frac{1}{2}, \dots$

$$d = \frac{1}{8} \quad \frac{5}{8}, \frac{3}{4}, \frac{7}{8}$$

16. What is the 37th term of the arithmetic sequence 4.1, 3, 1.9, 0.8, ...?

$$d = -1.1 \quad 4.1 + (37-1) \cdot (-1.1) = -35.5$$

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