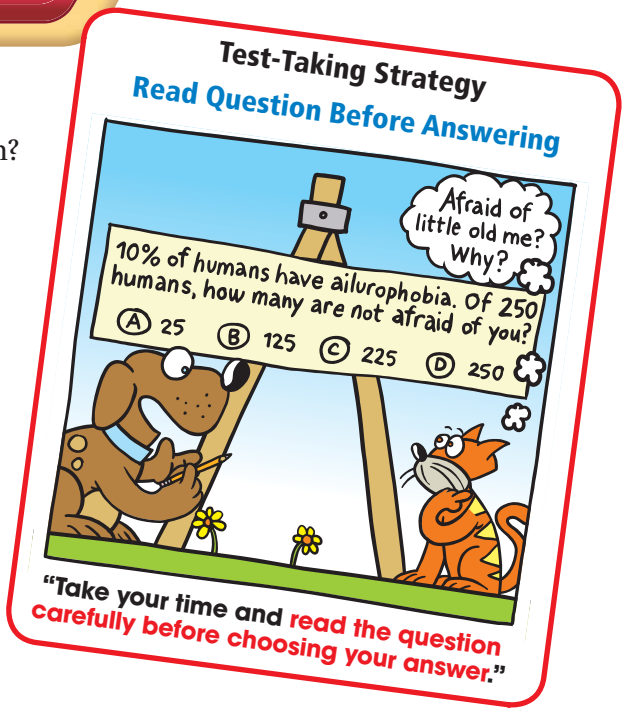
English Spanish

4 Standardized Test Practice



1. The domain of the function $y = 0.2x - 5$ is 5, 10, 15, 20. What is the range of this function?

A. 20, 15, 10, 5

B. 0, 5, 10, 15

C. 4, 3, 2, 1

D. $-4, -3, -2, -1$

2. A toy runs on a rechargeable battery. During use, the battery loses power at a constant rate. The percent P of total power left in the battery x hours after being fully charged, can be found using the equation shown below. When will the battery be fully discharged?

$$P = -0.25x + 1$$

F. After 4 hours of use

G. After 1 hour of use

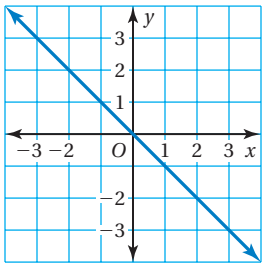
H. After 0.75 hour of use

I. After 0.25 hour of use

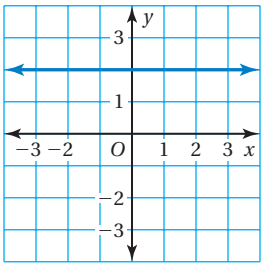
3. A limousine company charges a fixed cost for a limousine and an hourly rate for its driver. It costs \$500 to rent the limousine for 5 hours and \$800 to rent the limousine for 10 hours. What is the fixed cost, in dollars, to rent the limousine?

4. Which graph shows a nonlinear function?

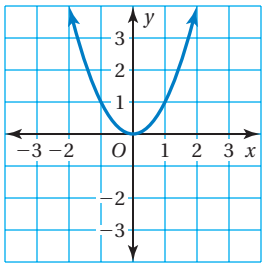
A.



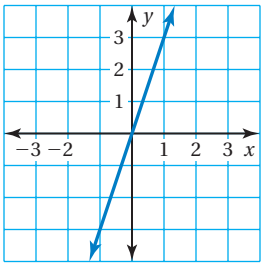
C.



B.



D.



5. The equations $y = -x + 4$ and $y = \frac{1}{2}x - 8$ form a system of linear equations. The table below shows the (x, y) values for these equations at six different values of x.

x	0	2	4	6	8	10
$y = -x + 4$	4	2	0	−2	−4	−6
$y = \frac{1}{2}x - 8$	−8	−7	−6	−5	−4	−3

What can you conclude from the table?

F. The system has one solution, when $x = 0$.

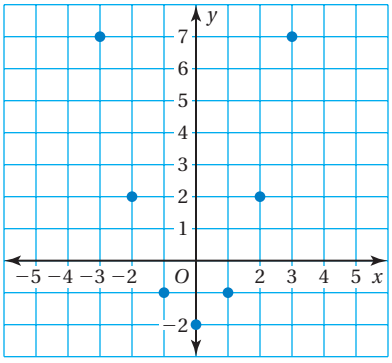
G. The system has one solution, when $x = 4$.

H. The system has one solution, when $x = 8$.

I. The system has no solution.

6. The temperature fell from 54 degrees Fahrenheit to 36 degrees Fahrenheit over a six-hour period. The temperature fell by the same number of degrees each hour. How many degrees Fahrenheit did the temperature fall each hour?

7. What is the domain of the function graphed in the coordinate plane below?



A. 0, 1, 2, 3

B. −2, −1, 2, 7

C. −3, −2, −1, 0, 1, 2, 3

D. −2, −1, 0, 1, 2, 3, 7

8. What value of w makes the equation below true?

$$\frac{w}{3} = 3(w - 1) - 1$$

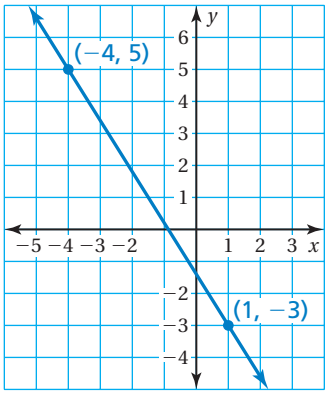
F. $\frac{3}{2}$

G. $\frac{5}{4}$

H. $\frac{3}{4}$

I. $\frac{1}{2}$

9. What is the slope of the line shown in the graph below?



A. $-\frac{2}{5}$

B. $-\frac{2}{3}$

C. $-\frac{8}{5}$

D. $-\frac{8}{3}$

10. A line with slope of $\frac{1}{3}$ contains the point (6, 1). What is the equation of the line?

F. $y = \frac{1}{3}x$

G. $y = \frac{1}{3}x + 1$

H. $x - 3y = 3$

I. $x + 3y = 3$

11. The tables show how the perimeter and area of a square are related to its side length. Examine the data in the table.

Think Solve Explain

Side Length	1	2	3	4	5	6
Perimeter	4	8	12	16	20	24

Side Length	1	2	3	4	5	6
Area	1	4	9	16	25	36

Part A Does the first table show a linear function? Explain your reasoning.

Part B Does the second table show a linear function? Explain your reasoning.

12. A bottle of orange extract marked 25 mL costs $2.49. What is the cost per liter?

A. $2490.00 per L

B. $99.60 per L

C. $9.96 per L

D. $0.00249 per L