

## Unit 4 Review

Student \_\_\_\_\_

1. Which set of ordered pairs does **not** represent a function?

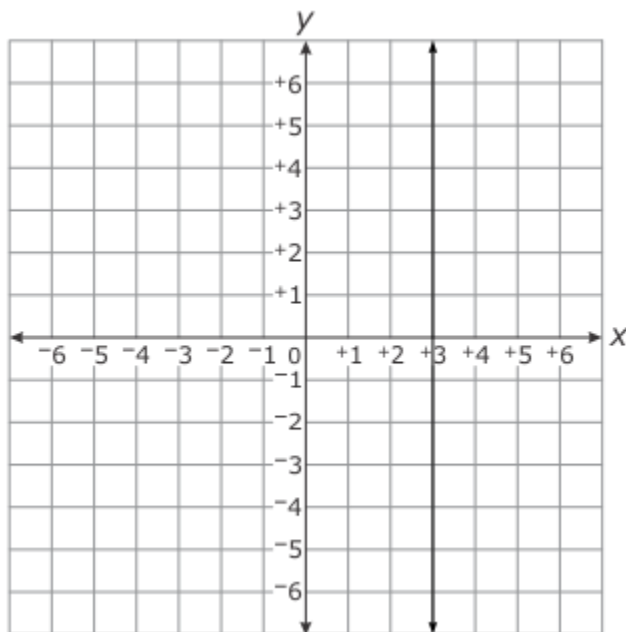
A.  $\{(3, 7), (-1, 9), (-5, 11)\}$

B.  $\{(9, -5), (4, -5), (-1, 7)\}$

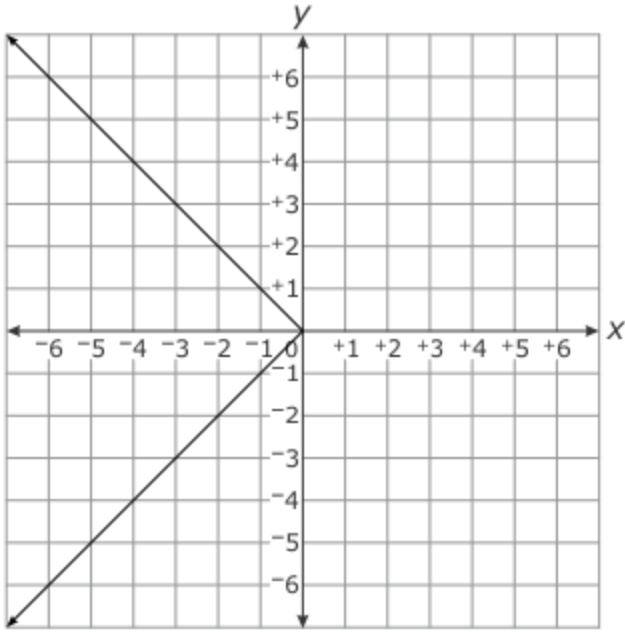
C.  $\{(-2, 1), (3, -4), (-2, -6)\}$

2. In which graph is  $y$  a function of  $x$ ?

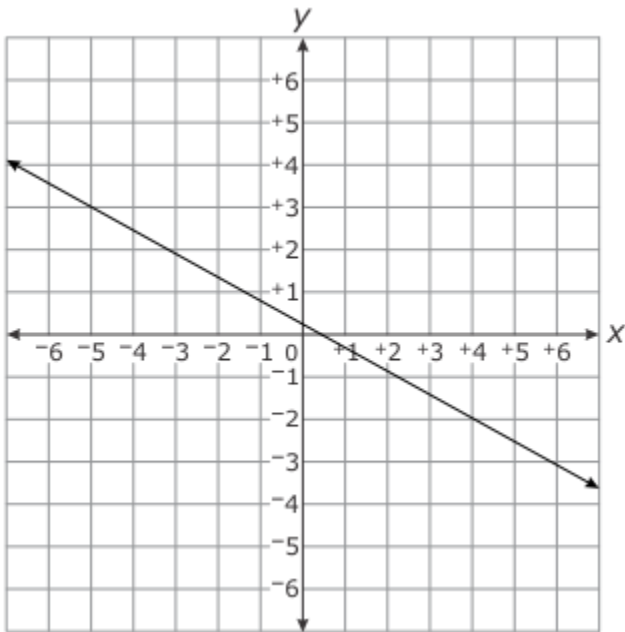
A.



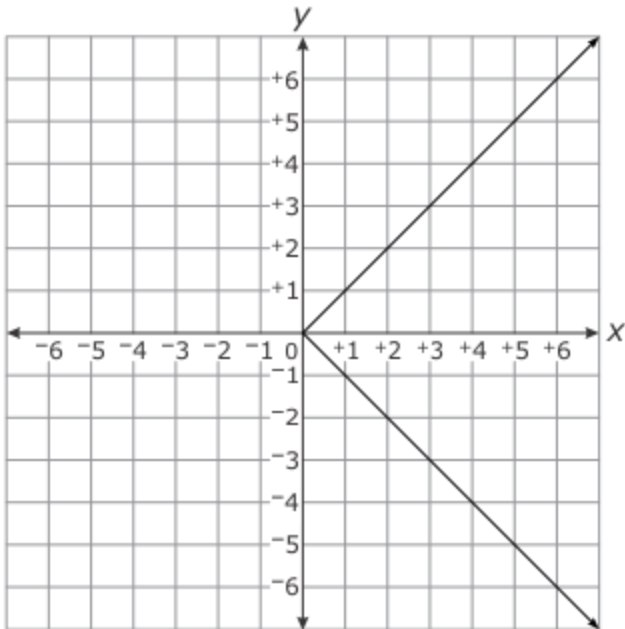
**B.**



**C.**



D.



3. Which equation is not a function?

A.  $y = |x|$

B.  $y = x^2$

C.  $x = 10$

D.  $y = 0.5$

4. Which relation is a function?

A.  $\{(2, 6), (3, 9), (4, 12), (5, 15)\}$

B.  $\{(-4, -8), (-4, -2), (4, 8), (4, 2)\}$

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

D.  $\{(2, 4), (2, 5), (3, 5), (3, 6)\}$

5. Which relation below is a function?

A.

$x$	$y$
0	-2
1	-3
0	-4
2	-5

B.

$x$	$y$
0	2
1	3
0	4
2	5

C.

$x$	$y$
0	0
1	1
0	8
2	27

**D.**

$x$	$y$
0	0
1	-4
2	8
3	4

**6. Which equation represents a linear function?**

**A.**  $y = \frac{1}{2}x^2 - 5$

**B.**  $y = \frac{1}{2}x^3 - 5$

**C.**  $y = \frac{1}{2}x + 5$

**D.**  $y = \left(\frac{1}{2}\right)^x - 5$

**7. In which equation is  $y$  a nonlinear function of  $x$ ?**

**A.**  $2y = x$

**B.**  $y = \frac{2}{3}x$

**C.**  $y = 3x + 5$

**D.**  $xy = 4$

8. In which equation is  $y$  a non-linear function of  $x$ ?

A.  $y = 3x$

B.  $y = x^2 - 1$

C.  $y = 0.5x - 1$

D.  $y = -5x + 4$

9. In which equation is  $y$  a nonlinear function of  $x$ ?

A.  $y = -3x + 6$

B.  $y = -5 + 0.4x$

C.  $y = 2x - 8$

D.  $y = x^2 - 6$

10. Which equation represents a linear function?

A.  $y = 3x - 2$

B.  $y = 3x^2 - 2$

C.  $y = 3x^3 - 2$

11. In which table is  $y$  a nonlinear function of  $x$ ?

A.

$x$	$y$
1	4
2	5
3	6
4	7

B.

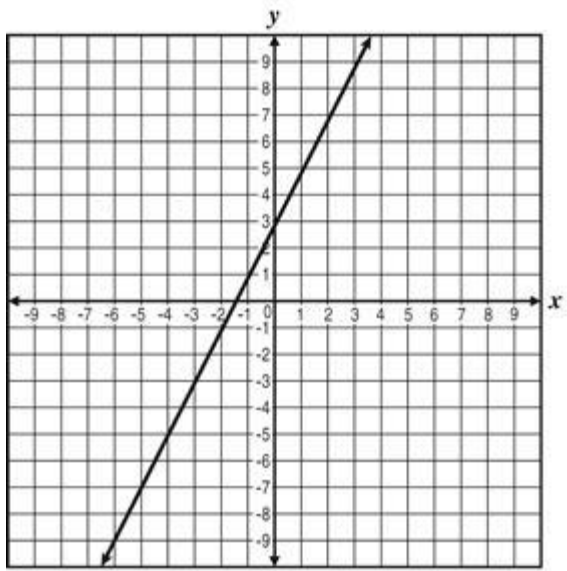
$x$	$y$
1	1
2	4
3	9
4	16

C.

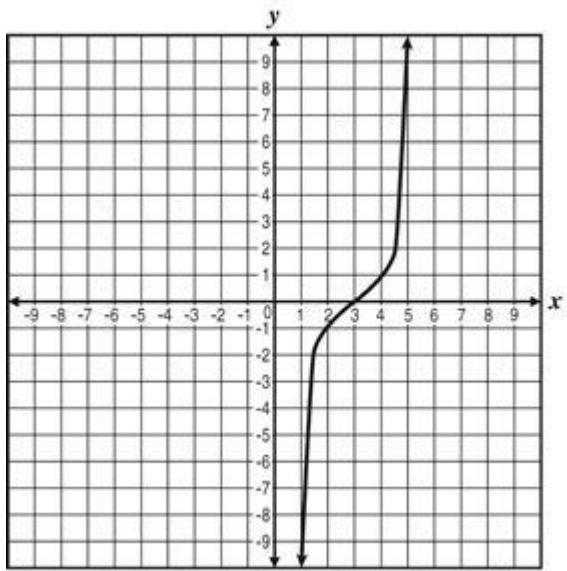
$x$	$y$
1	3
2	5
3	7
4	9

12. Which graph shows a nonlinear relationship?

A.

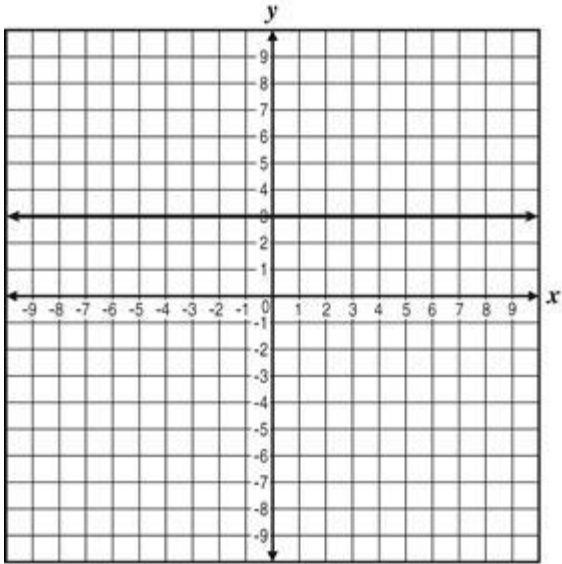


B.

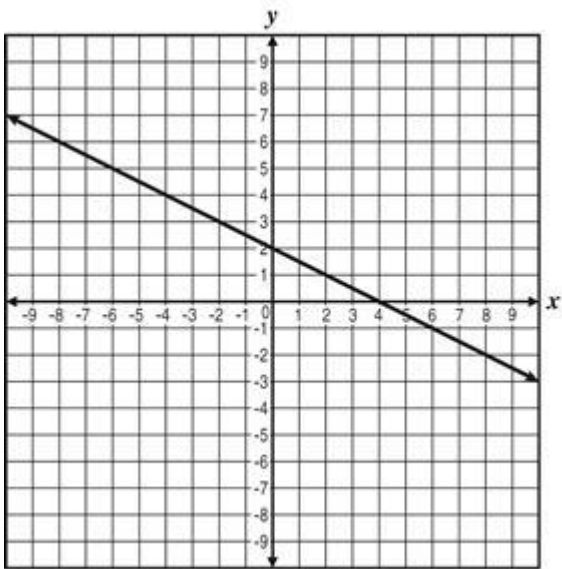




C.



D.



13. Which represents a linear function?

A.  $y = \frac{5}{x}$

B.  $y = x^2 - 3$

C.  $y = |x - 1|$

D.  $y = \frac{1}{2}x + 2$

14. Which equation represents a linear function?

A.  $y = \frac{1}{2}x^2 - 5$

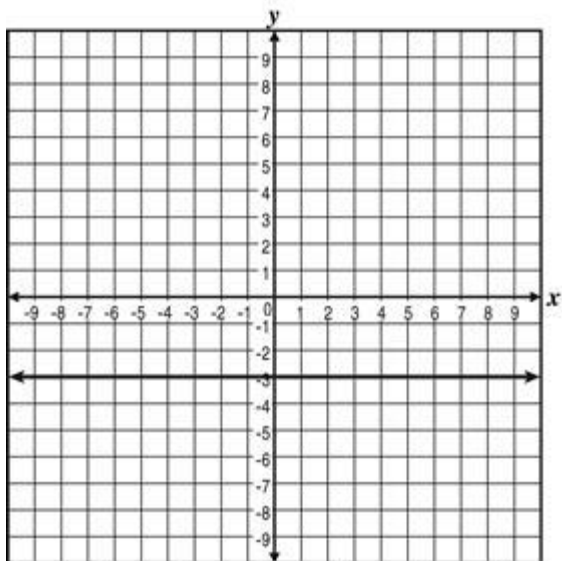
B.  $y = \frac{1}{2}x^3 - 5$

C.  $y = \frac{1}{2}x + 5$

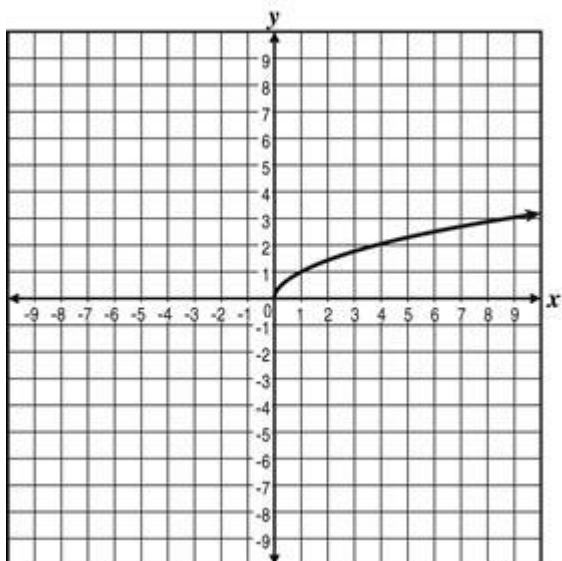
D.  $y = \left(\frac{1}{2}\right)^x - 5$

15. Which graph best represents a nonlinear function?

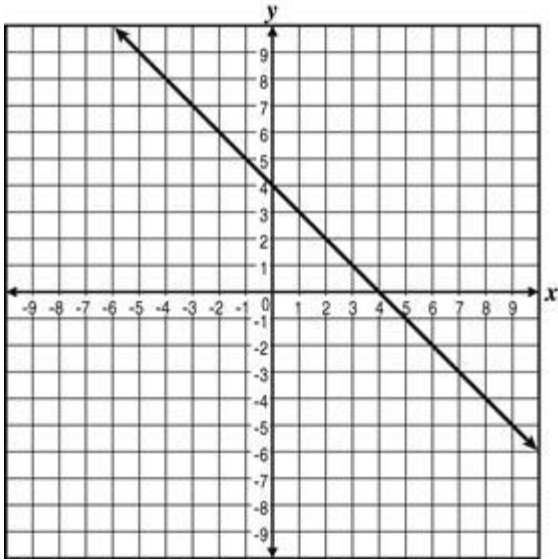
A.



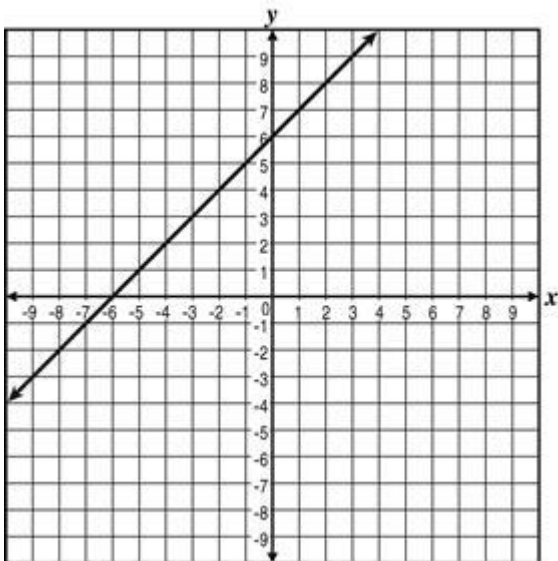
B.



C.

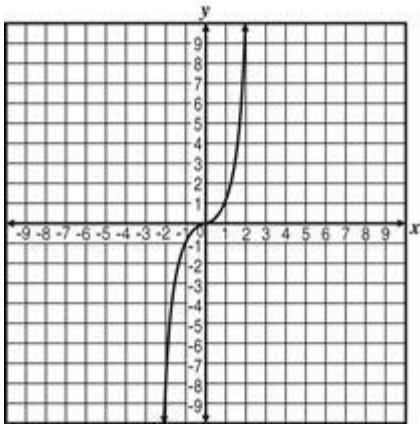


D.

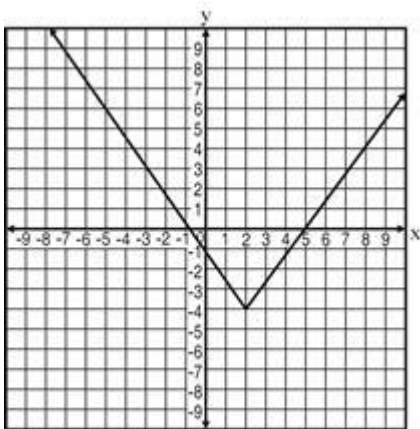


16. Which graph is not a function?

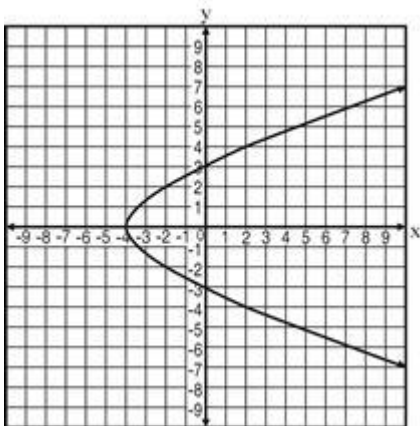
A.



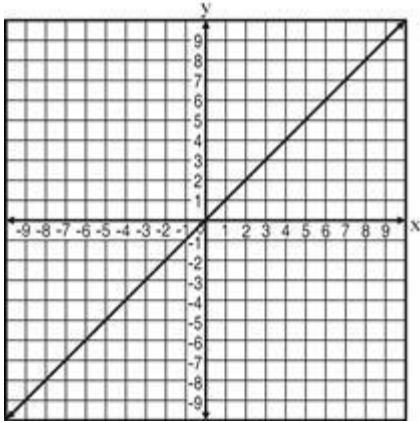
B.



C.

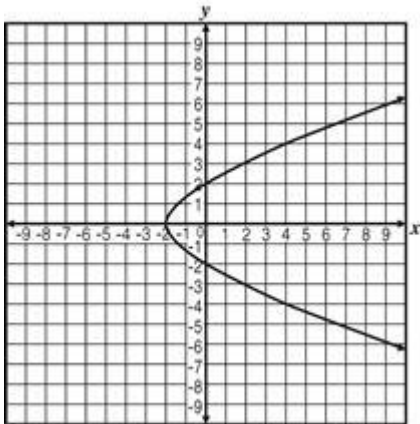


D.

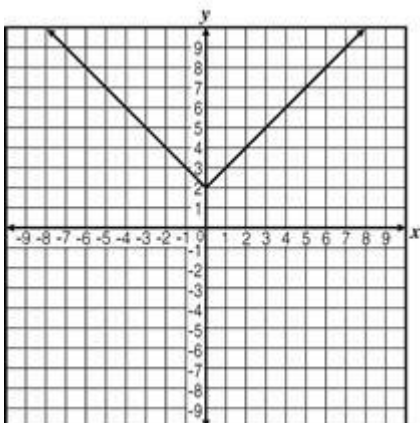


17. Which graph represents a linear function?

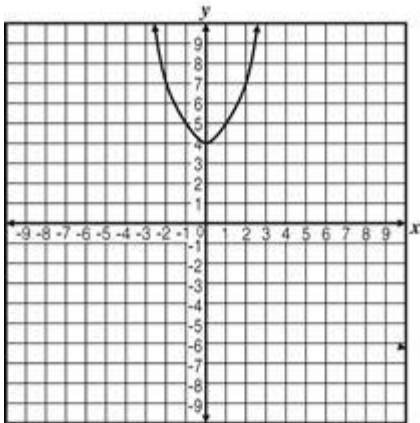
A.



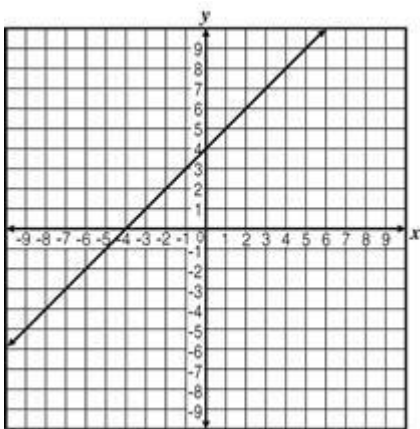
B.



C.



D.



18. Which table of values below represents a nonlinear function?

A.

$x$	$f(x)$
1	1
2	4
3	9
4	16

B.

$x$	$f(x)$
1	1
2	2
3	3

4	4
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C.

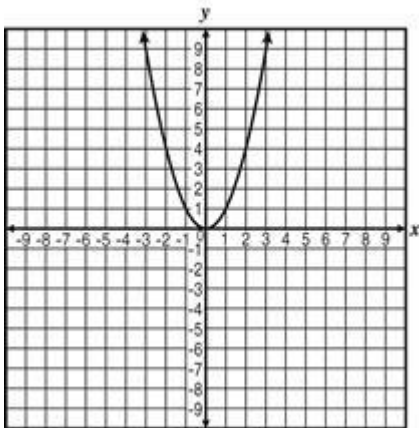
$x$	$f(x)$
1	1
2	1
3	1
4	1

D.

$x$	$f(x)$
1	5
2	7
3	9
4	11

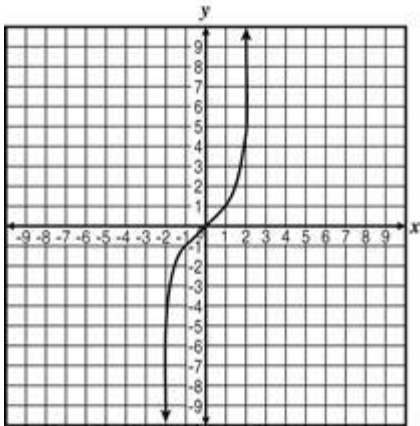
19. Which of the following graphs is not a function?

A.

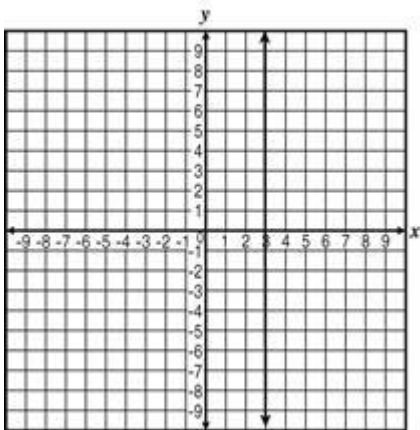




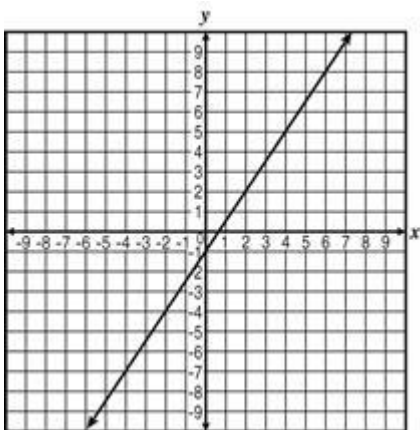
B.



C.

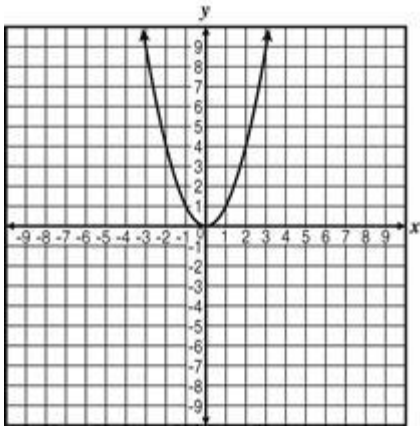


D.

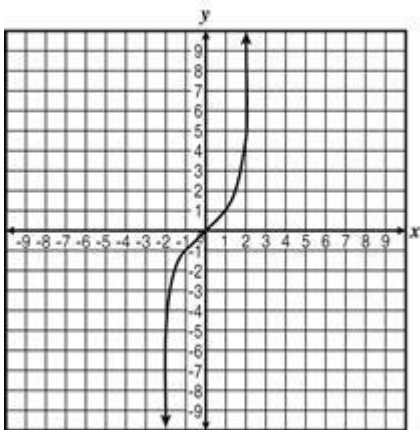


20. Which of the following graphs represents a linear function?

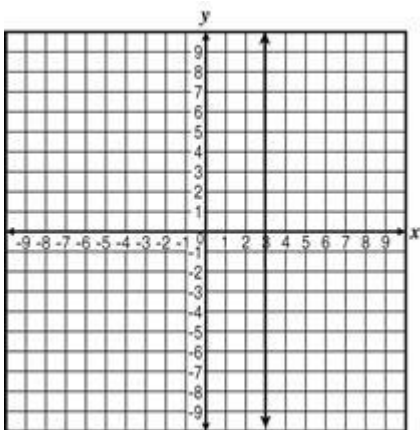
A.



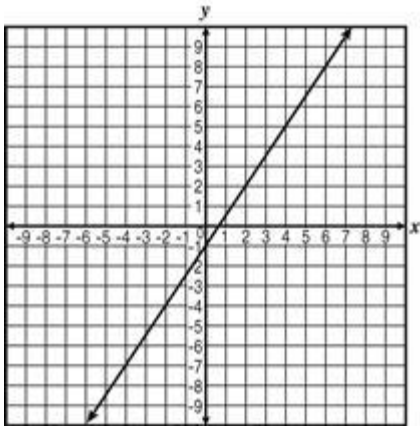
B.



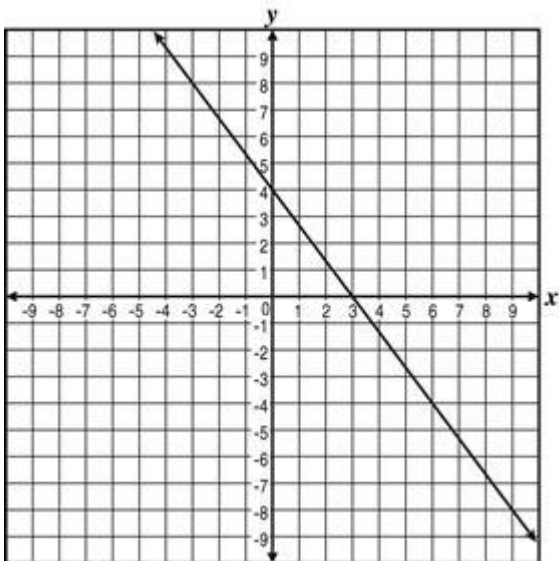
C.



D.



21. What is true about this graph?



- A.  $y$  decreases as  $x$  increases
- B.  $y$  increases as  $x$  increases
- C.  $x$ -values remain constant
- D.  $y$ -values remain constant

**22.** If  $f(x) = -2x + 5$ , find  $f(-2)$

**23.** If  $f(x) = -6x - 15$ , find  $f(-3)$

**24.** Write  $y = 3x + 14$  in function notation.

**25.** Write  $9x - 3y = -15$  in function notation.