TEST NAME: **NAMSCM811314F.3**
TEST ID: **129079**
GRADE: **08**
SUBJECT: **Mathematics**
TEST CATEGORY: **My Classroom**
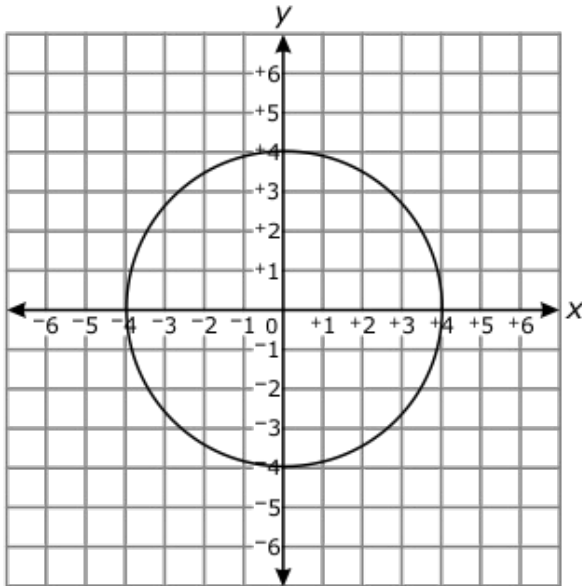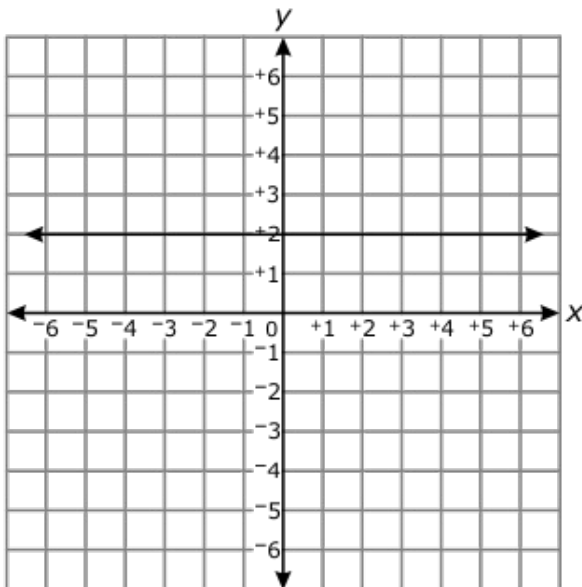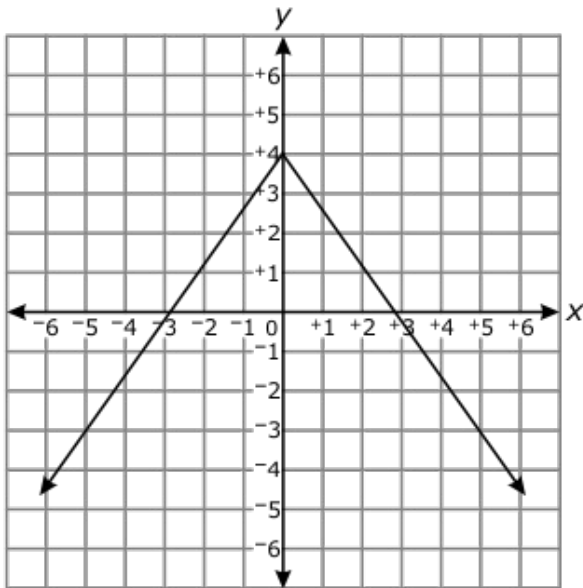
1. Which graph displays a linear function?

A.

B.

C.

2. 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. $y = {}^-5x + 4$

3. Which choice is a linear function?

A.

x	y
0	0
1	1
2	9

B.

x	y
2	2
4	9
6	8

C. $y = 2x^2 - 10$

D. $2x + 3y = 12$

4. Which equation is non-linear?

A. $y = 2x + 4 - 3x$

B. $y = 2(4 + 3x) + 2$

C. $y = 3x(2 - x) + 4$

D. $y = x(4 + 3) + 2x$

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

A.

x	y
3	⁻2
3	0
3	4
3	5
3	8

B.

x	y
6	4
4	2
2	0
0	2
⁻2	4

C.

x	y
6	4
4	2
2	0
4	⁻2
6	⁻4

D.

x	y
⁻3	4
⁻2	5
⁻1	6
0	7
1	8

6. Which table contains ordered pairs from a linear function?

A.

x	y
4	3
1	12
−2	−6

B.

x	y
−3	3
1	−5
3	−9

C.

x	y
−3	2
1	4
3	6

D.

x	y
3	6
2	1
−2	1

7. In which equation is y a linear function of x

A.
$$y = 4x - 8$$

B.
$$y = 4x^2 - 8$$

C.
$$y = 4xy - 8$$

D.
$$y = \frac{4}{x} - 8$$

8. Which table shows a nonlinear function?

A.

x	y
⁻2	8
⁻1	4
0	⁻2
1	⁻10

B.

x	y
⁻2	5
⁻1	4
0	3
1	2

C.

x	y
⁻2	⁻1
⁻1	1
0	3
1	5

9. Which equation is a linear function?

A. $y = x$

B. $y = x^2$

C. $y = x^3$

D. $y = x^4$

10. In which equation is y a linear function of x?

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

B. $y = (0.96x)^2$

C. $y = 5x$

D. $x = 5$

11. Which set of ordered pairs is linear?

    A. {(⁻2, 3), (⁻1, 6), (0, 12)}

    B. {(3, ⁻1), (5, ⁻3), (10, ⁻10)}

    C. {(⁻1, 0), (2, ⁻3), (5, ⁻6)}

12. In which table is *y* a linear function of *x*?

A.

x	*y*
1	14
2	13
3	12
4	11

B.

x	*y*
1	7
2	11
5	9
7	4

C.

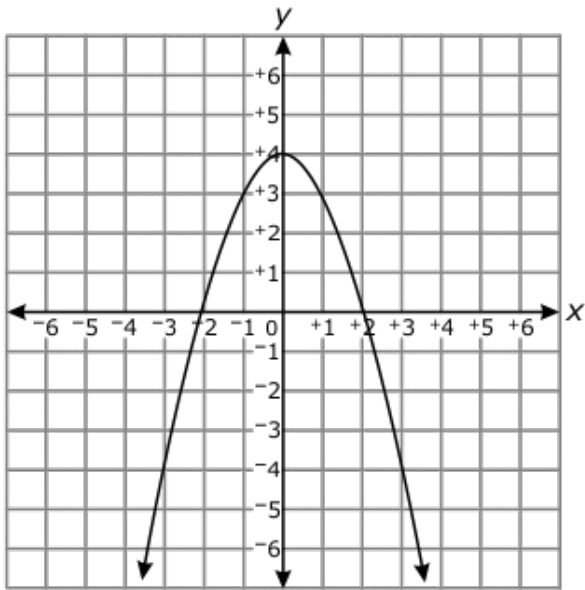| *x*	*y*
1	12
1	13
1	14
1	15

D.

x	*y*
0	2
1	4
2	8
3	16

13. In which graph is *y* a nonlinear function of *x*?

A.
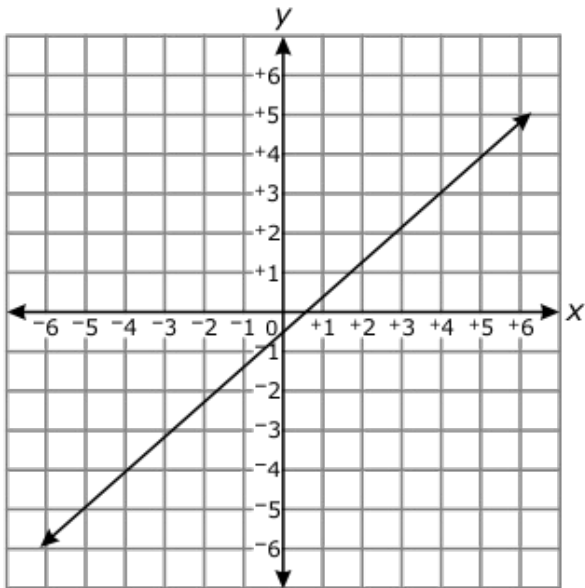
B.

C.
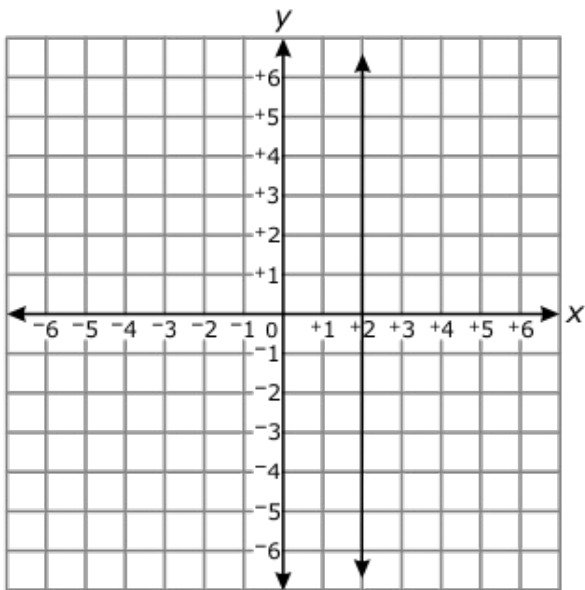
14. Which table represents a linear function?

A.

x	y
0	⁻6
1	⁻2
2	2
3	6

B.

x	y
0	5
1	7
2	11
3	17

C.

x	y
0	2
1	4
2	8
3	16

15. 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

16. Which equation is a nonlinear function?

A. $y = 4$

B. $y = \dfrac{x}{4}$

C. $y = \dfrac{4}{x}$

17. Which equation represents a linear function?

A. $x = 5 - y^2$

B. $y = 4x - 1$

C. $y = 2(x^2 - 4x + 5)$

D. $y = 1{,}000(1.04x)^6$

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

   A $y = 3$

   B. $y = 3x$

   C. $y = x^2 + 1$

   D. $y = {}^-2x + 2$
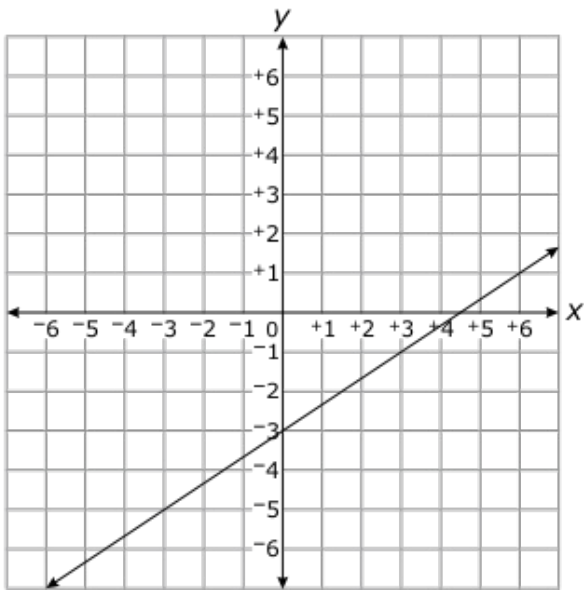
19. In which equation is y a linear function of x?

   A

      $y = x^2 + 4$

   B.

      $y = 7x + 5$

   C.

      $4y + 1 = x^2$

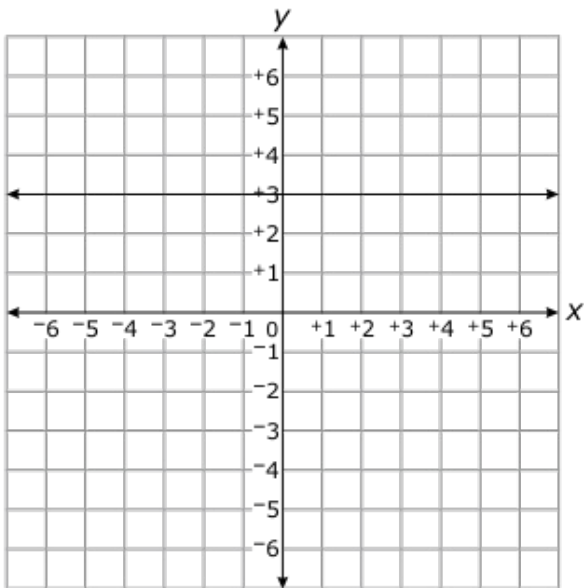   D.

      $3y = \sqrt{x}$

20. Which equation is linear?

   A $y = x^{-4}$

   B. $y = 7x^2$

   C. $y = 7x^3$

   D. $y = 7x$
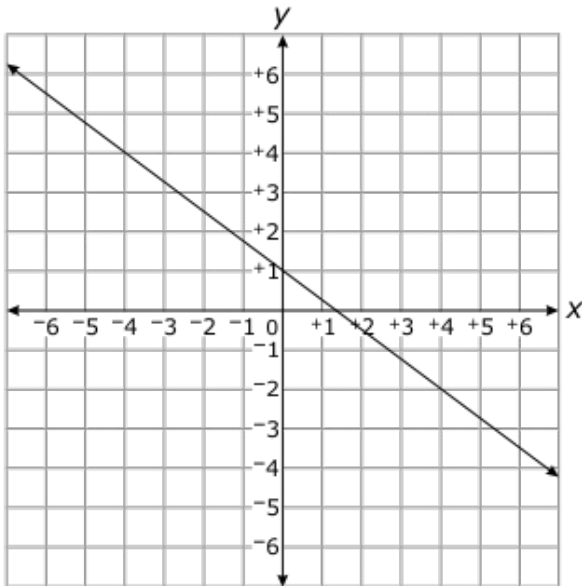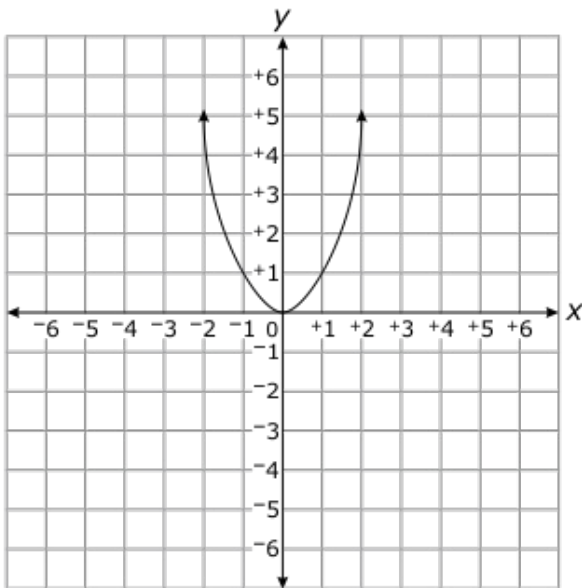
21. In which graph is y a nonlinear function of x?

A.

B.

C.

D.

22. Which equation is non-linear?

A. $xy = 5$

B. $y = 5$

C. $x + y = 5$

D. $y = x + 5$

23. In which equation is *y* a nonlinear function of *x*?
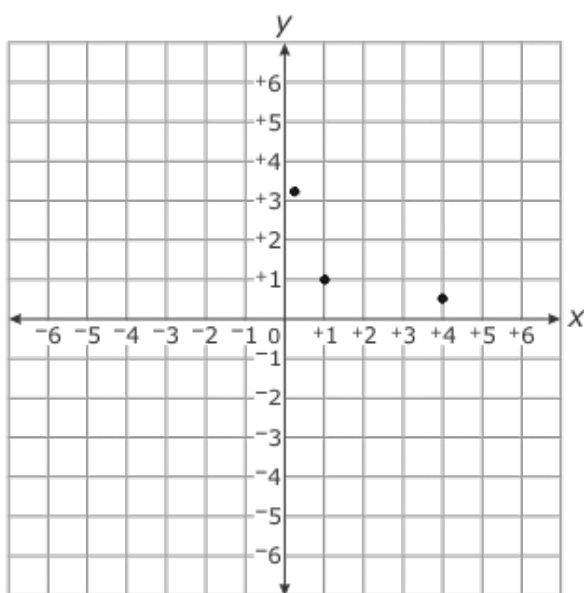
A.
$$2y = x$$

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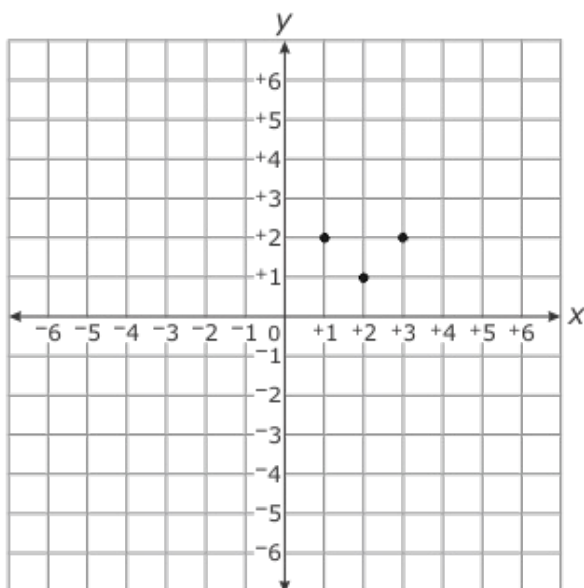$$y = \frac{2}{3}x$$

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

D.
$$xy = 4$$

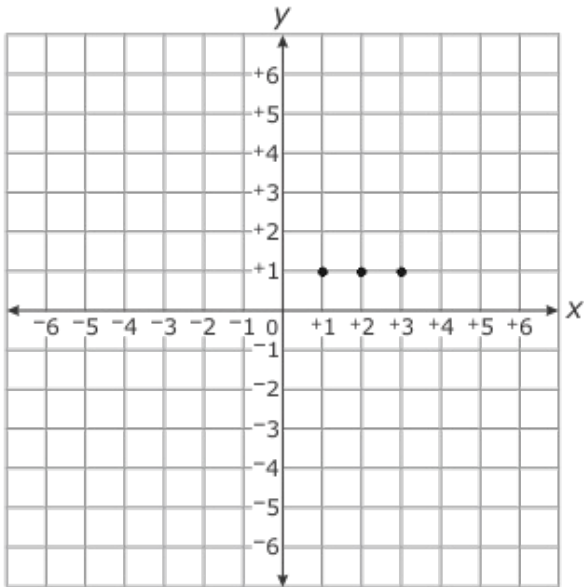24. Which set of data could be represented by a linear function?

A.
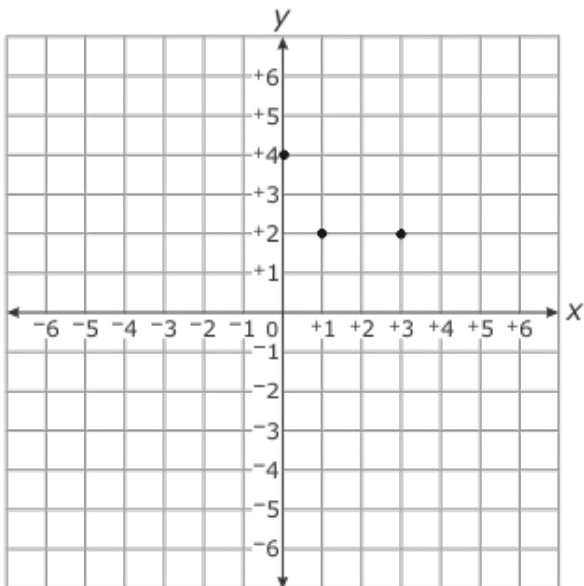

B.

C.

D.

25. Which equation represents a non-linear function?

A. $y = 5$

B. $x = 3$

C. $5 - y = 4$

D. $2x^2 + 2 = 14y$

26. Which function is non-linear?

A.

x	y
0	0
2	4
3	9

B.

x	y
2	1
4	3
6	5

C. $y = 4$

D. $2x - 4y = 15$

27. Which equation is a non-linear function?

A. $y = {}^-4x + 2$

B. $y = 5$

C. $y = x^2$

D. $y = 5x$

28. In which table is *y* a linear function of *x*?

A.

x	y
0	10
2	6
4	4
6	2

B.

x	y
⁻2	⁻2
0	4
2	10
4	16

C.

x	y
⁻4	2
⁻2	5
0	7
2	12

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

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

B.
$$y = \frac{-1}{4}x$$

C.
$$y = 1.5^x$$

D.
$$y = x + 200$$

30. Which equation is a linear function?

A. $y = x^2$

B. $y = \dfrac{2}{x}$

C. $x = y - 2$

D. $x = y^2$

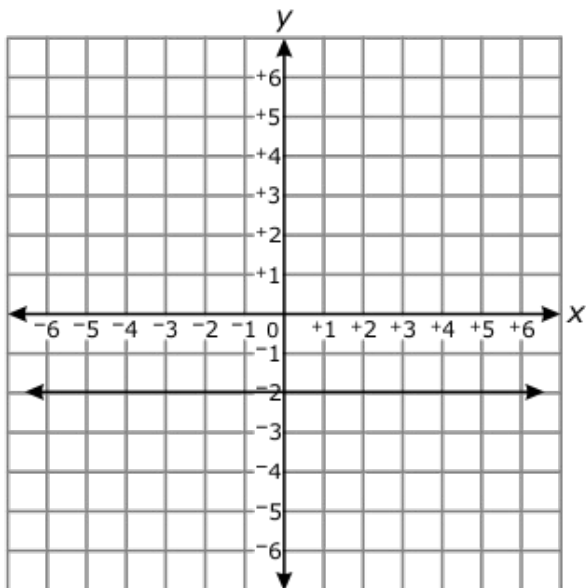31. Which represents a non-linear function?

A.
$$y = \frac{1}{3}x + 5^2$$
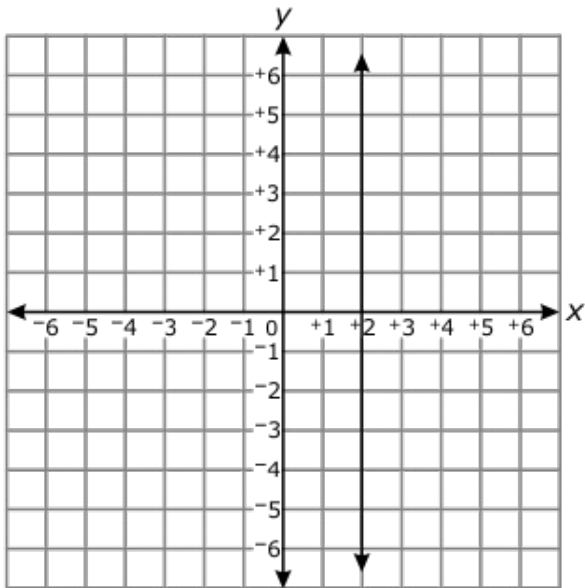
B.
$$y = {}^{-}3x + 8$$

C.
$$y = \frac{1}{3}x^2 + 5$$

D.
$$y = 3x - 8$$

32. Which graph displays a nonlinear function?

A.

schoolnet.

B.

C.
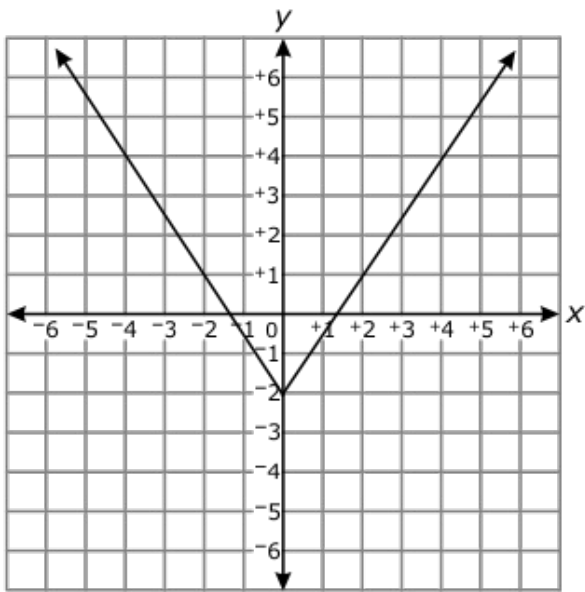
33. In which table is *y* a linear function of *x*?

A.

x	y
0	0
2	4
⁻2	4

B.

x	y
0	0
1	1
⁻2	2

C.

x	y
0	⁻4
2	⁻3
⁻4	⁻6

D.

x	y
0	0
1	2
1	3

34. In which table is *y* a linear function of *x*?

A.

x	y
⁻1	2
0	1
1	2
2	5

B.

x	y
⁻1	⁻5
0	⁻2
1	1
2	4

C.

x	y
⁻1	3
0	0
1	⁻1
2	0

D.

x	y
⁻1	⁻2
0	⁻1
1	⁻2
2	⁻10

35. Which set of points are linear?

A. (⁻1, 9), (0, 8), (1, 9)

B. (1, 4), (5, 6), (7, 7)

C. (⁻2, 13), (0, ⁻5), (2, 3)

D. (1, 2), (2, 10), (3, 8)

36. Which is a linear equation?

    A. $y = 2x^2 + 3$

    B. $y = 2x + 3$

    C. $y = 2^x + 3$

    D. $y = \dfrac{2}{x} + 3$

37. Which table of values represents a linear function?

A.

x	y
1	1
3	6
5	15

B.

x	y
1	1
3	4
5	6

C.

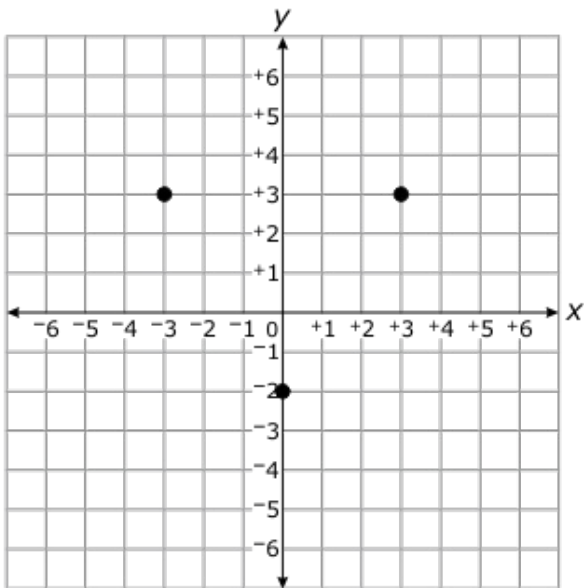| x	y
1	2
3	4
5	12

D.

x	y
1	2
3	6
5	10

38. Which equation represents a linear function?
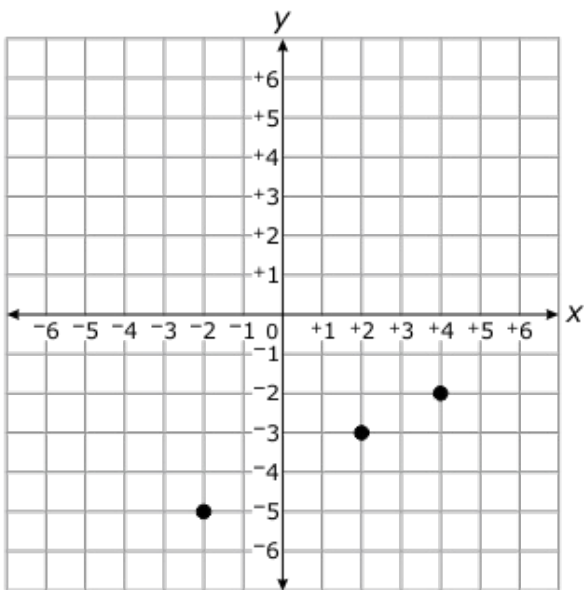
    A. $y = 3x - 2$

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

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

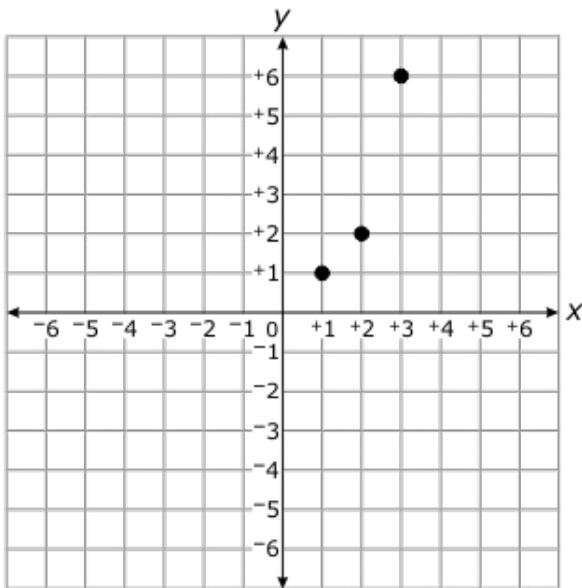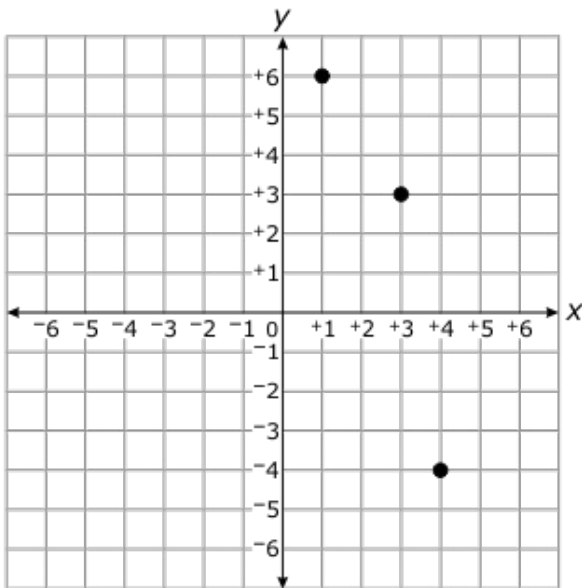39. Which set of points on the graph represents a linear function?

schoolnet.

A.

B.

C.

D.

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

A. $y = {}^-3x + 6$

B. $y = {}^-5 + 0.4x$

C. $y = 2x - 8$

D. $y = x^2 - 6$

41. Which equation represents a non-linear function?

    A. $y = 3x - 9$

    B. $y = 7(1.02)^x$

    C. $2x + 5y = 7$

    D. $x^2 + 2x - 3 = x^2 + y$

42. Which set of points are linear?

    A. $(^-1, ^-2)$, $(0, 6)$, $(1, 2)$

    B. $(0, ^-4)$, $(1, ^-1)$, $(3, 5)$

    C. $(2, 3)$, $(4, 2)$, $(6, 3)$

    D. $(1, 1)$, $(4, 16)$, $(6, 36)$

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

    A. $y = 2x - 3$

    B. $3x + 2y = 10$

    C. $y = \dfrac{1}{x} + 7$

    D. $y = {}^-5x$

44. Which equation represents a linear function?

    A. $y = 2x$

    B. $6x + 4y = 3xy$

    C. $y = 4 - x^2$

    D. $7xy = 12$

45. Which equation is non-linear?

A. $\dfrac{y+1}{2} = \dfrac{x-1}{3}$

B. $x = 2y - 7$

C. $x + 4 = {}^-2$

D. $y + 1 = x^2 - 3$

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

A. $y = \dfrac{1}{2}x - 3$

B. $y = \dfrac{{}^-x}{3} + 4$

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

D. $y = \dfrac{{}^-4x + 3}{9}$

47. In which equation is y a linear function of x?

A. $y = \sqrt{x}$

B. $y = x^2$

C. $y = x$

48. Which equation is a linear function?

A. $y = x^3 + 4$

B. $y = x^2 + 4$

C. $y = x + 4$

D. $y = {}^-x^2 + 4$

49. Which set of points is nonlinear?

  A.   {(⁻3, ⁻7), (0, ⁻6), (3, ⁻5)}

  B.   {(⁻2, ⁻1), (0, ⁻3), (4, ⁻5)}

  C.   {(⁻4, 6), (0, 9), (4, 12)}