

TEST NAME: **8th Grade EOG Review-F**
TEST ID: **146483**
GRADE: **08**
SUBJECT: **Mathematics**
TEST CATEGORY: **Shared Classroom Assessments**

Student: _____

Class: _____

Date: _____

1. An eye doctor charges an exam fee, plus a charge for the number of boxes of contact lenses purchased.
 - Lindsey had an exam and ordered 2 boxes of contact lenses. She paid \$112.97.
 - Josh had an exam and ordered 6 boxes of contact lenses. He paid \$272.93.

How much is the exam fee?

- A \$32.99
 - B \$39.99
 - C \$45.49
 - D \$56.49
2. For a school group, a skating rink charges a flat fee of \$50 for skates for the students, plus a charge per student to use the skating rink.
 - For 40 students, the skating rink charges \$180.
 - For 75 students, the skating rink charges \$293.75.

Which equation represents the amount the skating rink charges for x students?

- A $y = 3.25x + 35$
 - B $y = 3.25x + 50$
 - C $y = 4.50x + 35$
 - D $y = 4.50x + 50$
3. Which set of ordered pairs represents a linear relationship?
 - A $\{(0, 1), (2, 2), (-2, 0), (4, 3)\}$
 - B $\{(0, -2), (1, 1), (-1, -3), (2, 3)\}$
 - C $\{(0, -1), (1, 1), (-1, -2), (2, 3)\}$
 - D $\{(0, -2.5), (5, 2.5), (1, -2.5), (-1, -3.5)\}$

4. Gina runs at a rate of 2 feet per second. The table below shows the time and the corresponding distance John has run.

Time per second, x	Total Feet, y
2	6
5	15
6	18

Which statement is true?

- A. Gina runs 1 foot per second faster than John.
 - B. John runs 1 foot per second faster than Gina.
 - C. Gina and John are running at the same speed.
 - D. John runs 3 seconds per foot faster than Gina.
5. Taylor and Natasha are both saving money.
- Taylor starts her savings with \$10 and plans to save \$20 a week.
 - Natasha's savings plan can be modeled with the function $y = 50 + 15x$, where y is the amount in savings and x is the number of complete weeks.

After how many weeks will Taylor and Natasha have an equal amount saved?

- A. Week 3
- B. Week 5
- C. Week 8
- D. Week 10

6. Tony's Pizza uses the formula $C = 7.59 + 0.69t$ to calculate the cost, C , of a pizza with t toppings. Bob's Pizza uses the table below to show the cost of pizzas with a variety of toppings.

Number of Toppings	Cost
2	\$8.75
4	\$10.25
5	\$11.00

Which pizza shop charges less for a 3-topping pizza, and by how much?

- A. Bob's Pizza charges \$0.16 less.
 - B. Tony's Pizza charges \$0.16 less.
 - C. Bob's Pizza charges \$0.06 less.
 - D. Tony's Pizza charges \$0.06 less.
7. Two computer repair companies charge differing rates for their services.
- We Fix It Computer Repair charges based on the equation $C = 90 + 30h$, where C is the total cost for working h hours.
 - John's Computer Repair charges are shown in the table below.

Hours	Total Cost
1	\$55
2	\$100
3	\$145
4	\$190

Which company has a higher hourly rate, and by how much?

- A. We Fix It Computer Repair by \$80
- B. We Fix It Computer Repair by \$15
- C. John's Computer Repair by \$80
- D. John's Computer Repair by \$15

8. Which table displays a linear relationship?

A.

x	y
2	4
3	6
4	10
5	16
6	24

B.

x	y
0	10
2	8
4	10
6	12
8	14

C.

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

D.

x	y
-3	8
-2	6
-1	4
0	2
1	0

9. The price for pizza at 2 different restaurants is shown below.
- Monty’s Pizza uses the function $P = 8.00 + \$0.95t$ to calculate the price, P , of a pizza with t toppings.
 - Kay’s Pizza uses the table below to calculate the price of a pizza:

Number of Toppings (t)	Price (P)
2	\$9.50
5	\$13.25
7	\$15.75

Which company has the higher price for a 4-topping pizza, and by how much?

- A. Monty’s Pizza has the higher price by \$0.40.
- B. Monty’s Pizza has the higher price by \$0.10.
- C. Kay’s Pizza has the higher price by \$0.20.
- D. Kay’s Pizza has the higher price by \$0.50.

10. Two different service repair companies' charges are shown below:
- Patricia's Computer Repair charges \$80 for a service call and \$24 per hour for any repair that is needed.
 - Steve's Electronics Repair charges their customers based on the table below.

Hours on Site	Repair Cost
2	\$130
4	\$190
6	\$250

If a repair takes 3 hours, which company charges less and by how much?

- A. Patricia's Computer Repair charges \$6 less than Steve's Electronics Repair.
 - B. Steve's Electronics Repair charges \$6 less than Patricia's Computer Repair.
 - C. Patricia's Computer Repair charges \$8 less than Steve's Electronics Repair.
 - D. Steve's Electronics Repair charges \$8 less than Patricia's Computer Repair.
11. Rick earns a daily rate of \$25.00, plus an additional \$3.00 per unit he sells. John's earnings can be modeled with the equation $P = 2s + 40$, where P is his pay for selling s number of units. If John and Rick each earned \$100, which statement is true?
- A. John sold 5 fewer units than Rick.
 - B. Rick sold 5 fewer units than John.
 - C. John sold 25 fewer units than Rick.
 - D. Rick sold 25 fewer units than John.

12. Bill and Sue save their leftover lunch money. Sue saves \$5 a week. The equation $m = 3.50w$ models the amount of money, m , Bill has saved after w weeks. At the end of 36 weeks, how much more money has Sue saved than Bill?
- A. \$1.50
 B. \$54.00
 C. \$126.00
 D. \$180.00
13. Mike's Rentals uses the function $y = 75x + 150$ to calculate the total charge to a customer, y , to rent the van for x hours. The total charge to rent a van for different numbers of hours from Kevin's Rentals are shown in the table below.

Kevin's Rentals

Hours x	Total Charge y
2	\$340
4	\$480
6	\$620

Which statement is true?

- A. Kevin's Rentals charges \$40.00 less per hour than Mike's Rentals.
 B. Kevin's Rentals charges \$5.00 more per hour than Mike's Rentals.
 C. Mike's Rentals charges \$5.00 more per hour than Kevin's Rentals.
 D. Mike's Rentals charges \$40.00 less per hour than Kevin's Rentals.

14. Juliet and Sawyer are each saving for a new cell phone that costs \$250.
- Sawyer is saving money based on the function $y = 10x$, where y is the total he has saved, and x is the number of weeks he has been saving.
 - Juliet's savings are shown in the table below.

Juliet's Savings

Number of Weeks (x)	Total Money Saved (y)
3	15
7	35
11	55

Which statement is true?

- A Juliet saves \$5.00 less than Sawyer saves each week.
 - B Sawyer saves \$10.00 more than Juliet saves each week.
 - C It will take Juliet more than 50 weeks to have enough money saved.
 - D It will take Sawyer less than 20 weeks to have enough money saved.
15. The relation $(0, 1), (3, 4), (x, 6), (7, 9),$ and $(11, 14)$ is a function. Which could be the value of x ?
- A 0
 - B 3
 - C 6
 - D 7

16. Which equation is **not** a function?

- A $y = 3x^2$
- B $y = |x|$
- C $x = \frac{2}{y}$
- D $x = \frac{y}{2}$

17. Company R uses the formula $C = 36 + 40h$ to calculate the cost, C , for doing h hours of work. Company S uses the table below to calculate their charges.

Hours	1	3	7
Cost	\$80	\$158	\$314

Which company has the higher hourly rate, and by how much?

- A. Company R; \$1.00 more
 - B. Company S; \$1.00 more
 - C. Company R; \$3.00 more
 - D. Company S; \$3.00 more
18. In which table is y a nonlinear function of x ?

A.

x y
-8 -9
-5 -7
-1 -4
4 0

B.

x y
-7 -10
-4 -1
-3 2
-1 8

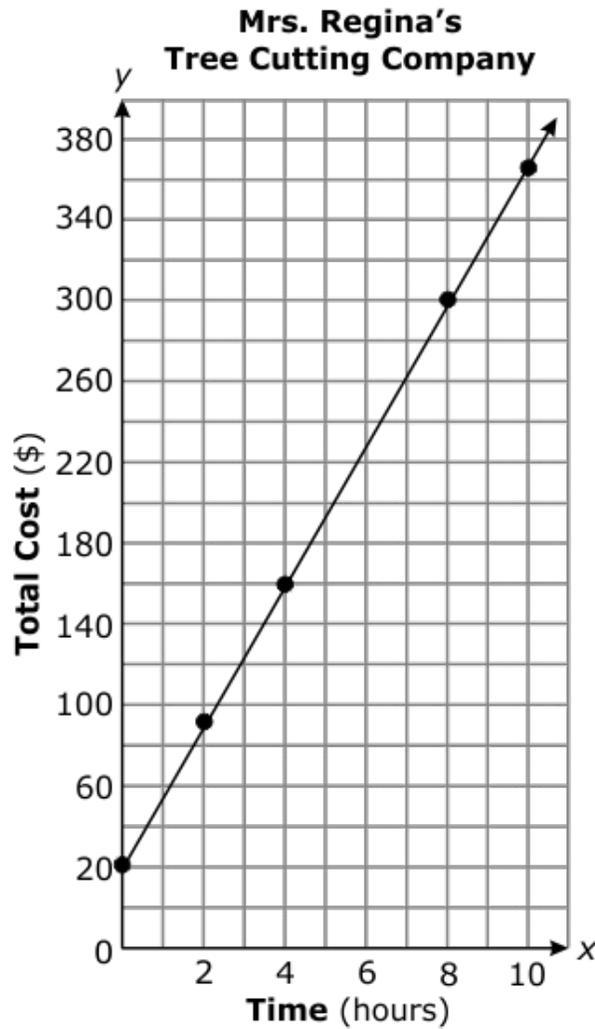
C.

x y
-10 2
-6 1
-2 0
10 -3

D.

x y
-4 10
-3 5
-1 -5
0 -10

19. Mr. Raul's Tree Cutting Company charges a flat fee of \$35 for a service call, plus \$30 per hour to cut trees. Mrs. Regina's Tree Cutting Company uses the graph below to determine the total cost of cutting down trees.



If a customer needs 5 hours of tree cutting service, which statement is true?

- A. Mr. Raul's Tree Cutting Company charges \$25 more than Mrs. Regina's Tree Cutting Company.
 - B. Mrs. Regina's Tree Cutting Company charges \$25 more than Mr. Raul's Tree Cutting Company.
 - C. Mr. Raul's Tree Cutting Company charges \$10 more than Mrs. Regina's Tree Cutting Company.
 - D. Mrs. Regina's Tree Cutting Company charges \$10 more than Mr. Raul's Tree Cutting Company.
20. While Henry was outside, he threw a paper airplane up into the air.

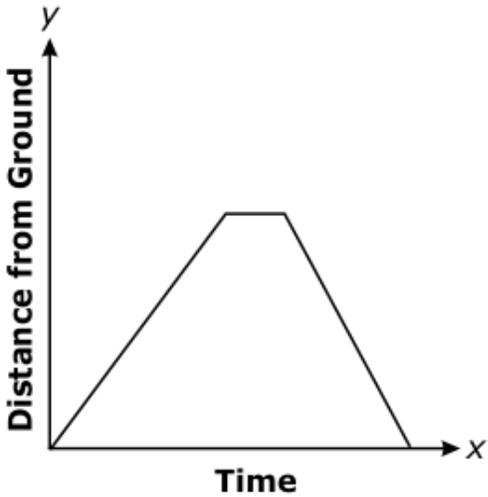
- The plane was lifted higher by the wind.
- It flew at a constant altitude for a few seconds.
- The plane then descended and landed in a bush.

Which graph **best** matches this scenario?

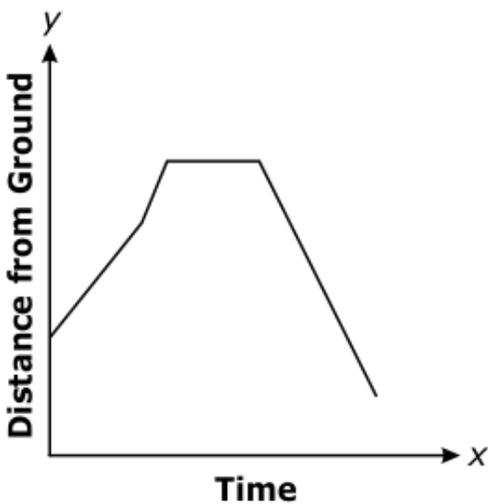
A.



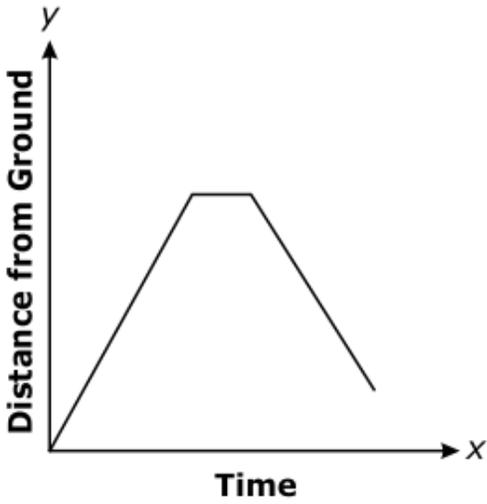
B.



C.

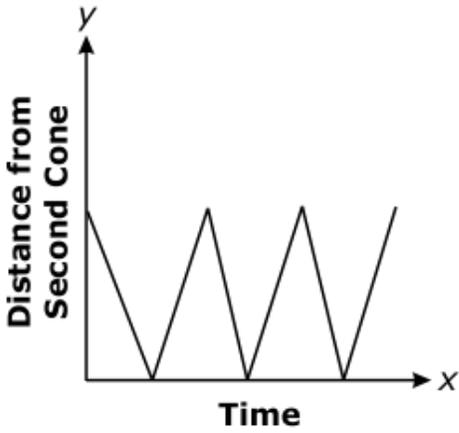


D.

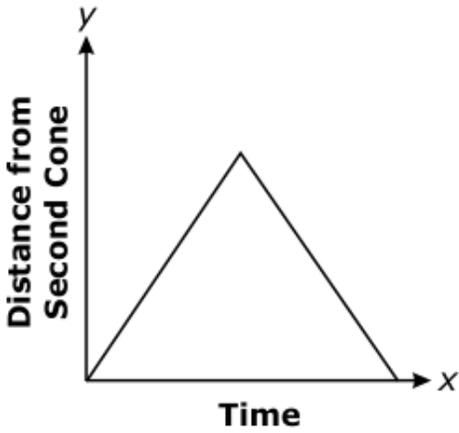


21. Which graph represents someone running back and forth between two cones that are 15 feet apart?

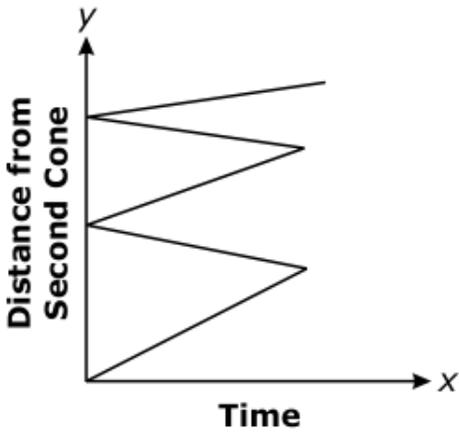
A.



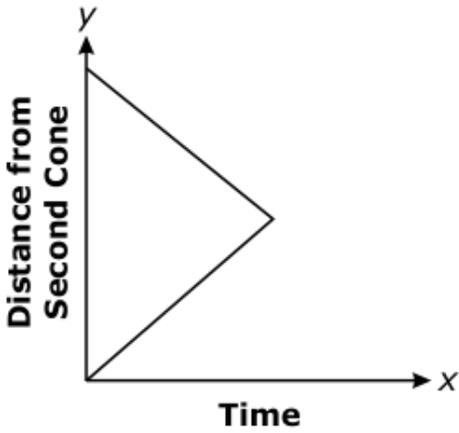
B.



C.



D.



22. The cost for two different cleaning services is shown below.

- Harper's Cleaning Service uses the equation $y = 20x + 25$ to calculate the cost, y , to clean x number of hours.
- Smith's Cleaning Service uses the table below to calculate the cost to clean a house:

Hours Worked (x)	Total Cost (y)
2	\$70
5	\$145
7	\$195

Which company charges more per hour, and how much do they charge?

- A. Harper's; \$25 per hour
- B. Harper's; \$20 per hour
- C. Smith's; \$25 per hour
- D. Smith's; \$20 per hour

23. Ryan paints the inside of houses to earn money. He charges a flat rate for supplies and a per room charge.

- To paint 3 rooms, Ryan charges \$155.
- To paint 5 rooms, Ryan charges \$225.

How much does Ryan charge per room?

- A. \$35
- B. \$40
- C. \$45
- D. \$50

24. Which data table shows a nonlinear function?

A.

x	y
-3	10
-1	6
1	2
3	-2

B.

x	y
13	-9.5
11	-6.5
9	-3.5
7	-0.5

C.

x	y
4	14
6	18
8	22
10	26

D.

x	y
3	20
9	24
12	28
15	36

25. The costs for boarding a dog at two different dog kennels are shown below.

- Shannon's Kennel uses the table below to show customers their prices.

Shannon's Kennel

Days	Cost
2	\$32.95
5	\$55.00
7	\$69.70

- Nathan's Kennel charges a fixed rate of \$14.50, and a daily rate of \$10.60.

If a dog is boarded for 10 days, which kennel offers the cheaper price, and by how much?

- A. Nathan's Kennel offers the cheaper price by \$23.25.
- B. Nathan's Kennel offers the cheaper price by \$37.50.
- C. Shannon's Kennel offers the cheaper price by \$28.75.
- D. Shannon's Kennel offers the cheaper price by \$32.50.

26. The relation below is a function.

x y
-2 2
4 7
7 6
 n 1

Which is a possible value for n ?

- A. -2
- B. 2
- C. 4
- D. 7

27. Madison delivers sandwiches for Jake's deli. She is paid an hourly rate plus a standard amount to cover expenses. In one week, she worked 10 hours and was paid \$120. Another week she worked 8 hours and was paid \$100. Which equation represents Madison's pay for working x hours?

A. $y = 20x + 10$

B. $y = 12x + 4$

C. $y = 10x + 20$

D. $y = 8x + 10$

28. Which relation below is **not** a function?

A. $\{(5, 2), (6, 3), (7, 4), (6, 5)\}$

B. $\{(8, 6), (6, 5), (-1, 2), (-4, 0)\}$

C. $\{(8, 9), (9, 8), (10, 7), (11, 7)\}$

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

29. Which table of data shows a nonlinear function?

A.

x	y
8	-4
10	-10
12	-18
14	-28

B.

x	y
-3	10
-2	8
2	0
5	-6

C.

x	y
-11	32
-8	22
-5	12
-2	2

D.

x	y
10	24
8	20
7	18
4	12

30. What is the equation of the line that passes through the origin and the point $(-1, 3)$?

A. $y = 3x$

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

C. $y = -\frac{1}{3}x$

D. $y = -3x$

31. Two functions are shown below.

Function 1: $y = -\frac{3}{2}x + 3$

Function 2	
x	y
-4	-4
-7	-10
-8	-12

What is the difference between the slopes of the two functions?

A. 0.5

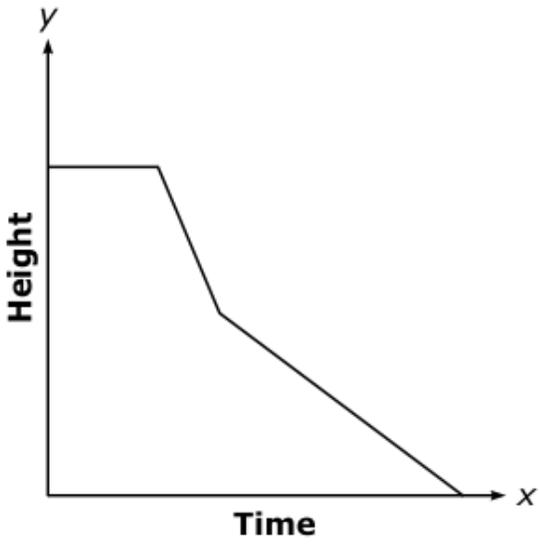
B. 1

C. 2

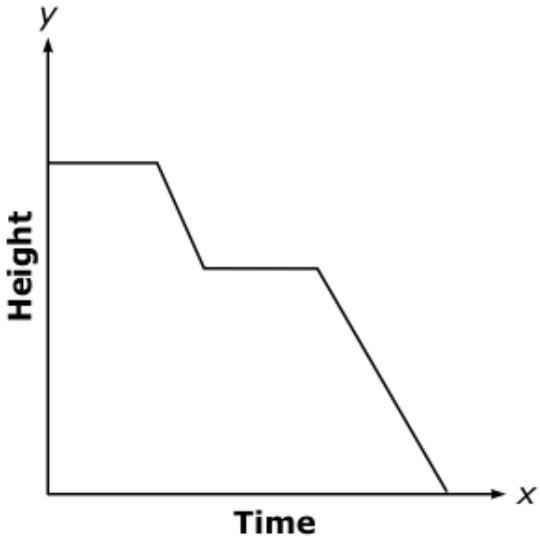
D. 3.5

32. Which graph **best** represents the height from the ground of a person who will jump out of an airplane, and then will release a parachute a few seconds later?

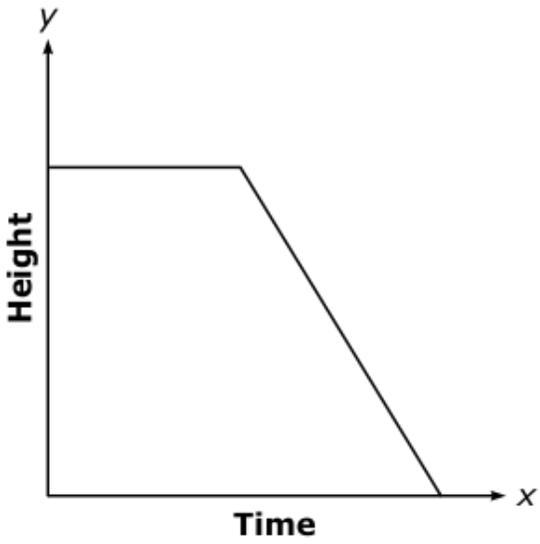
A.

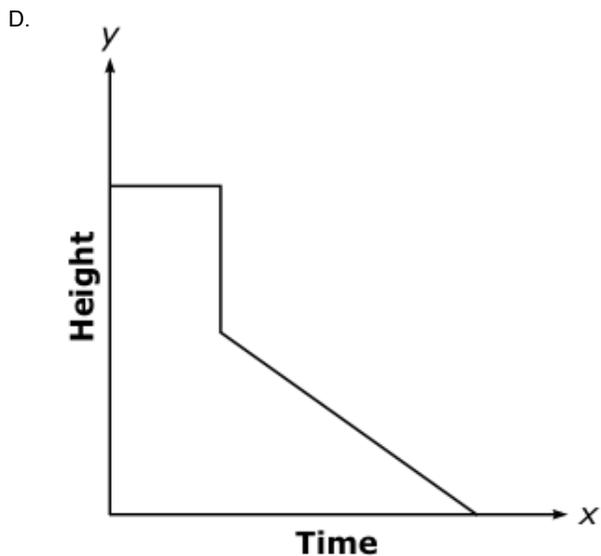


B.



C.





33. In which choice is y a function of x ?

- A. $x = y^2$
- B. $x = 2$
- C. $(4, 6), (5, 6), (7, 12), (8, 11)$
- D. $(1, 4), (2, 3), (3, 6), (3, 8)$

34. Which equation is nonlinear?

- A. $x = 9$
- B. $y = 2x + 9$
- C. $y = 2(x + 9)$
- D. $y = |2x| + 9$

35. Aaron deposits \$50 into a new savings account. His balance grows at a monthly rate, x , that is nonlinear. Which equation could model the balance, y , in Aaron's savings account?

- A. $y = 50x$
- B. $y = x + 50$
- C. $y = 1.03(50x)$
- D. $y = 50(1.03)^x$

36. Sam sells used cars.

- He earns a base salary each week, plus a 3% commission on any sales, s .
- Last week, he sold 3 cars for a total of \$24,000 and his pay for the week was \$1,020 before taxes.
- This week, he sold 5 cars for a total of \$30,000 and his pay for the week was \$1,200 before taxes.

Which function would model Sam's weekly salary, w ?

- A. $w = 180 + 0.03s$
- B. $w = 300 + 0.03s$
- C. $w = 0.03(180 + s)$
- D. $w = 0.03(300 + s)$

37. The set of data in the table below represents a linear function.

x	y
-2	$2\frac{2}{3}$
-1	2
0	$1\frac{1}{3}$
1	$\frac{2}{3}$

What is the equation for this function?

- A. $y = -\frac{2}{3}x + 2$
- B. $y = -\frac{2}{3}x + \frac{4}{3}$
- C. $y = -\frac{3}{2}x + 2$
- D. $y = -\frac{3}{2}x + \frac{4}{3}$

38. Which table shows a nonlinear relationship between x and y ?

A.

x	y
-3	-4
-1	-8
1	-12
3	-16
5	-20

B.

x	y
-3	-9
-1	-5
1	-1
3	3
5	7

C.

x	y
-3	6
-1	2
1	-2
3	-6
5	-10

D.

x	y
-3	13
-1	5
1	5
3	13
5	29

39. Which is an equation of the line that passes through the points $(-1, -2)$ and $(3, -7)$?

A $y = \frac{5}{4}x - 10\frac{3}{4}$

B $y = \frac{4}{5}x - 1\frac{1}{5}$

C $y = \frac{-5}{4}x - 3\frac{1}{4}$

D $y = \frac{-4}{5}x - 2\frac{4}{5}$

40. Which is an equation of the line that goes through the points $(-4, -1)$ and $(-2, -3)$?

A $y = 2x - 9$

B $y = 2x + 7$

C $y = -x - 5$

D $y = -x + 3$

41. Which represents a function?

A $x = -5$

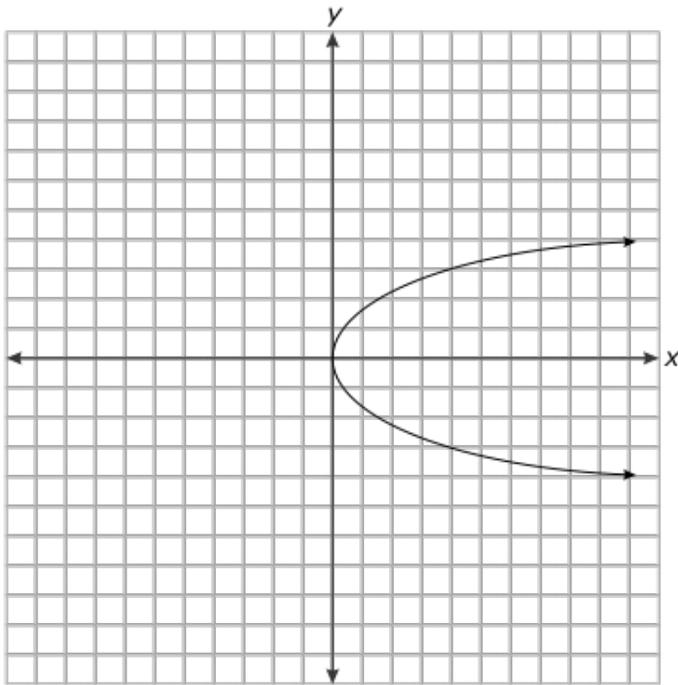
B $x = y^2 - 1$

C $\{(3, 4), (4, 3), (9, -2), (-7, 3), (8, 3)\}$

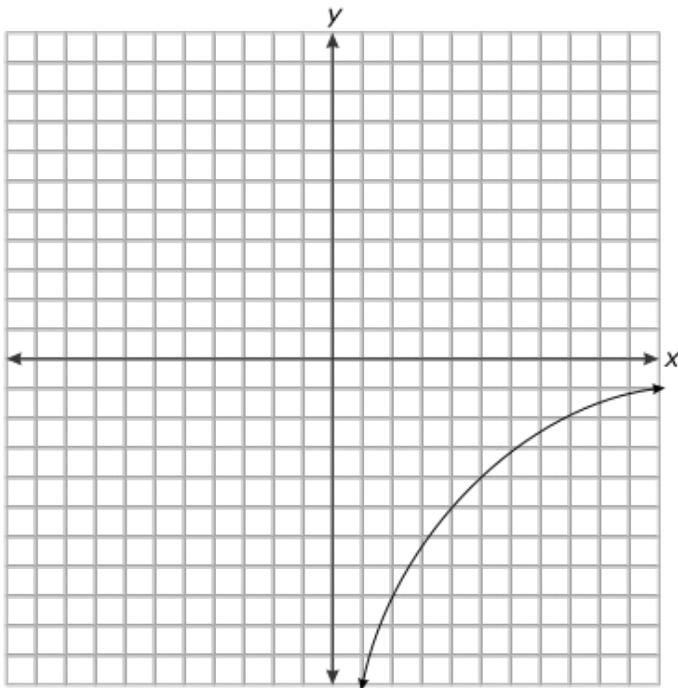
D $\{(5, 7), (2, -9), (0, 0), (3, 5), (2, -1)\}$

42. Which graph represents a function?

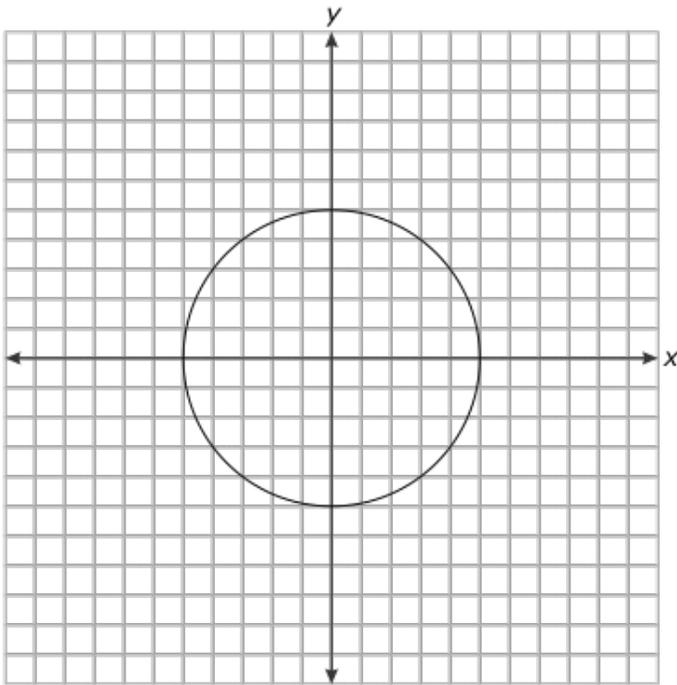
A.



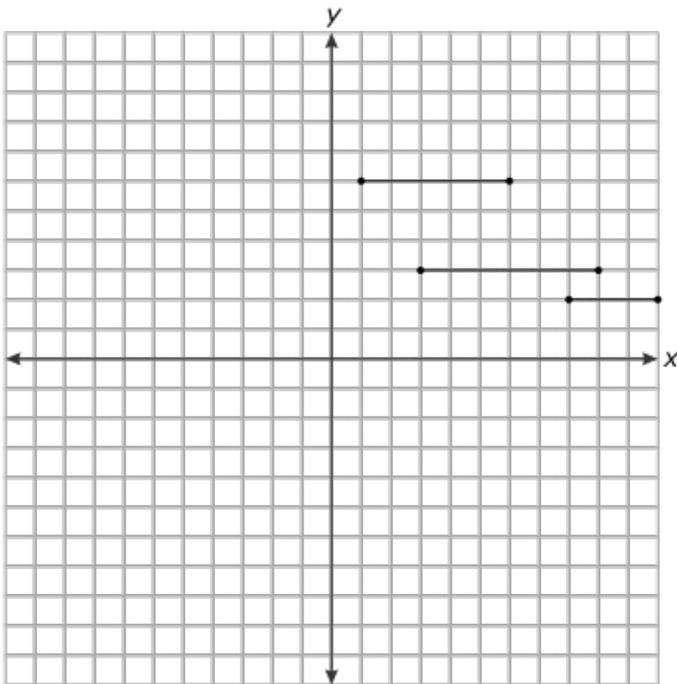
B.



C.

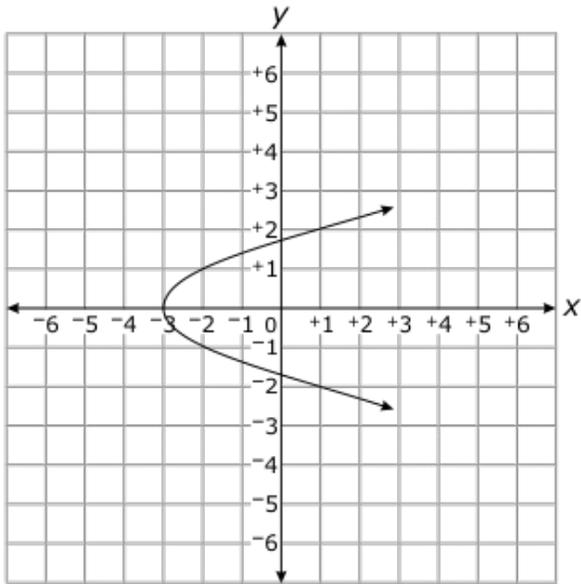


D.

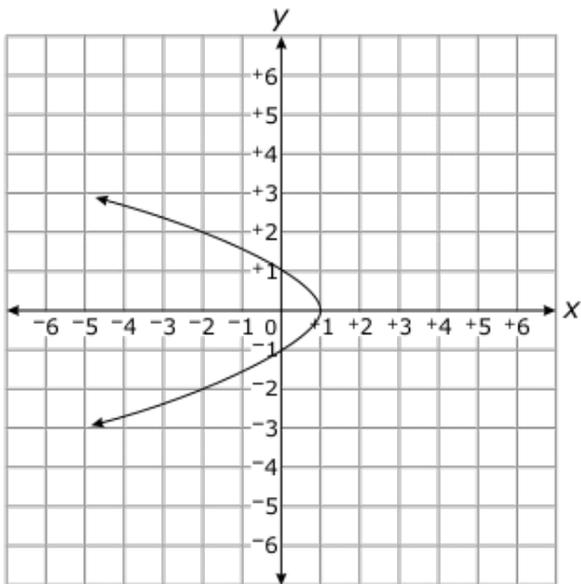


43. Which graph is a function?

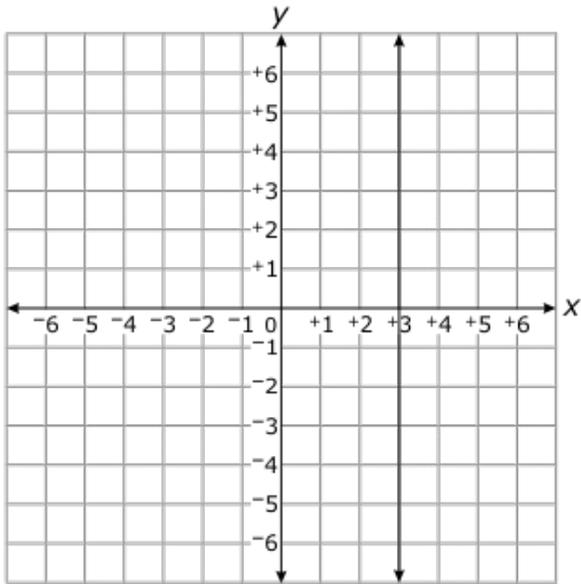
A.



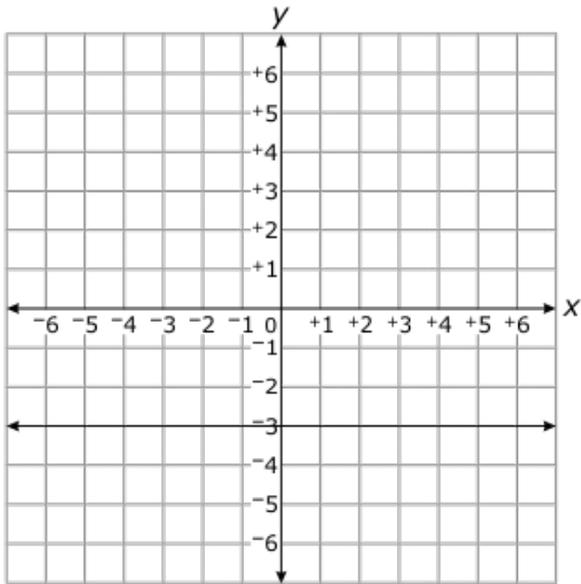
B.



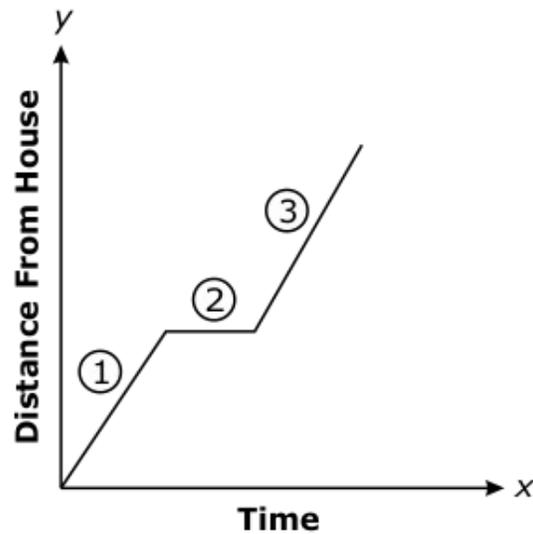
C.



D.



44. From his house, Jackson rode his bike to a store, bought a snack, and then continued on to his friend's house. The graph below shows Jackson's bike ride.



At which part of the graph was Jackson in the store?

- A. section 1
 - B. section 2
 - C. section 3
45. In which equation is y a function of x ?
- A. $x = y^2$
 - B. $x = 2y$
 - C. $x = 2$
46. Which function is nonlinear?
- A. $y = \frac{1}{2}x$
 - B. $y = x^2$
 - C. $y = 2x$

47. A shipping company charges a flat rate per package, plus an additional \$1.50 per pound. Mary shipped a package that weighed 3 pounds and paid \$9.50. Which function represents the cost, c , to ship a package that weighs p pounds?

- A. $c = 1.50p + 8$
- B. $c = 1.50p + 6.50$
- C. $c = 1.50p + 5$

48. The set of data in the table below represents a linear function.

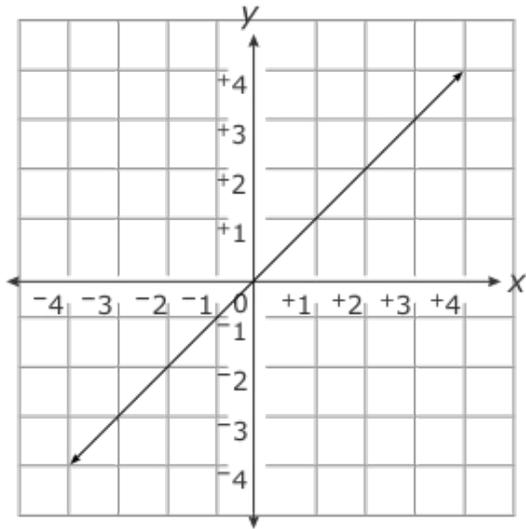
x	y
-2	0
-1	$-\frac{2}{5}$
2	$-\frac{8}{5}$

Which is an equation for this function?

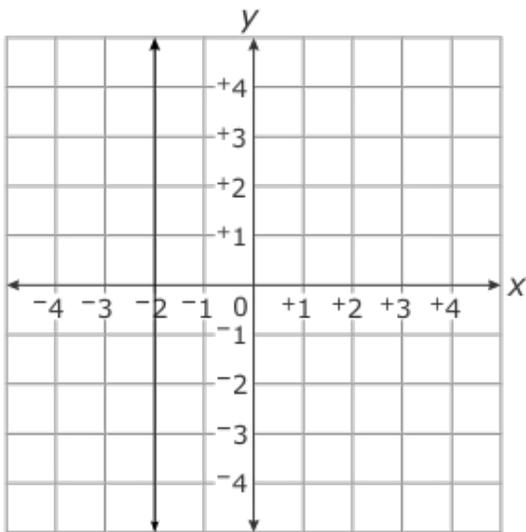
- A. $y = \frac{-2}{5}x - \frac{4}{5}$
- B. $y = \frac{-2}{5}x - 2$
- C. $y = x - \frac{4}{5}$
- D. $y = x - 2$

49. In which graph is y **not** a function of x ?

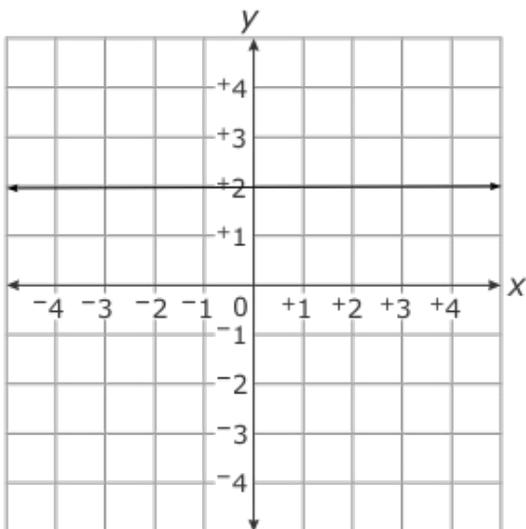
A.



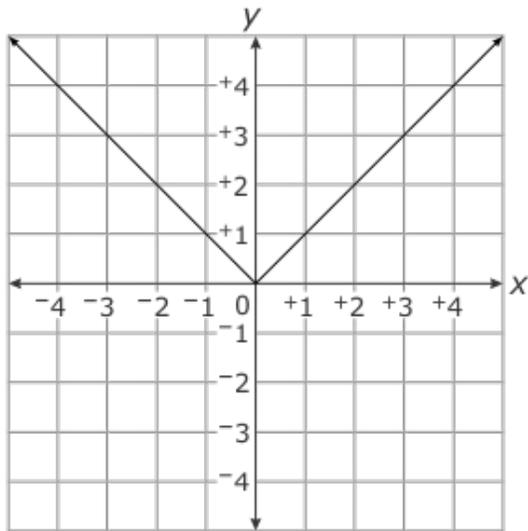
B.



C.



D.



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

A.

x	y
-2	6
-1	0
0	-2
1	0

B.

x	y
-2	10
-1	4
0	2
1	4

C.

x	y
-2	-8
-1	-5
0	-2
1	1

D.

x	y
-2	3
-1	1
0	-1
1	1

51. Which equation is non-linear?

- A. $x + y = 18$
- B. $x = -3$
- C. $y = -5x - 1$
- D. $y = x^2 + 2$

52. Which equation is non-linear?

- A. $y = 5x + 10$
- B. $y = \frac{5}{x}$
- C. $y = 3x$
- D. $y = 7$

53. The data in the table represents the monthly cost for John's cell phone service based on the number of minutes he uses in a month.

Minutes used (x)	100	200	300	400
Monthly Cost (y)	\$65	\$90	\$115	\$140

Which equation represents the cost of John's cell phone service?

- A. $y = 0.25x + 40$
- B. $y = 0.65x$
- C. $y = 4x + 25$
- D. $y = 25x + 100$

54. Which equation is a function?

- A. $y = 2$
- B. $x = 3$
- C. $x = y^2$
- D. $y^2 = 4x$

55. Which equation is **not** a function?

A. $x^2 = y$

B. $|x| = y$

C. $x = |y|$

56. In which set of ordered pairs is y a function of x ?

A. $\{(0, 1), (1, 2), (1, 3)\}$

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

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

57. Which equation is a linear function?

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

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

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

58. To join fitness club A, a person must pay \$50 to join and \$25 a month to use the club. The table below shows the cost to join and use fitness club B after different numbers of months.

Months	Cost
2	\$110
4	\$150
6	\$190

What is the difference in the cost to join the 2 fitness clubs?

- A. \$5
- B. \$10
- C. \$20
59. Which set of points is nonlinear?
- A. $\{(-2, 4), (-1, 1), (1, 1)\}$
- B. $\{(0, 0), (4, 2), (6, 3)\}$
- C. $\{(-1, -3), (0, -1), (3, 5)\}$
60. Which equation is linear?
- A. $y = x$
- B. $y = x^2$
- C. $y = x^3$
- D. $x^2 + y^2 = 9$

61. An electrician charges a flat rate for a service call, plus a per hour charge to do the work. The total bill for a job that took 6 hours was \$450. The total bill for a job that took 4 hours was \$330. How much does the electrician charge for a service call?

- A. \$60
- B. \$75
- C. \$85
- D. \$90

62. Which is an equation of the line with an x-intercept of 3 and a y-intercept of -1 ?

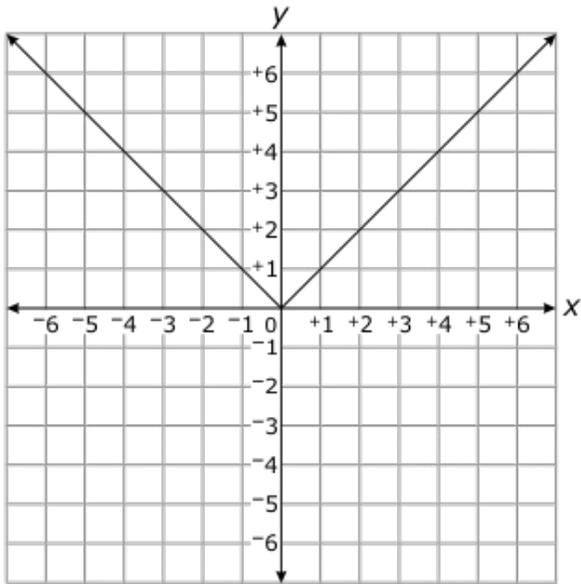
- A. $y = -x + 3$
- B. $y = -\frac{1}{3}x + 3$
- C. $y = \frac{1}{3}x - 1$
- D. $y = 3x - 1$

63. In which set of points is y a function of x ?

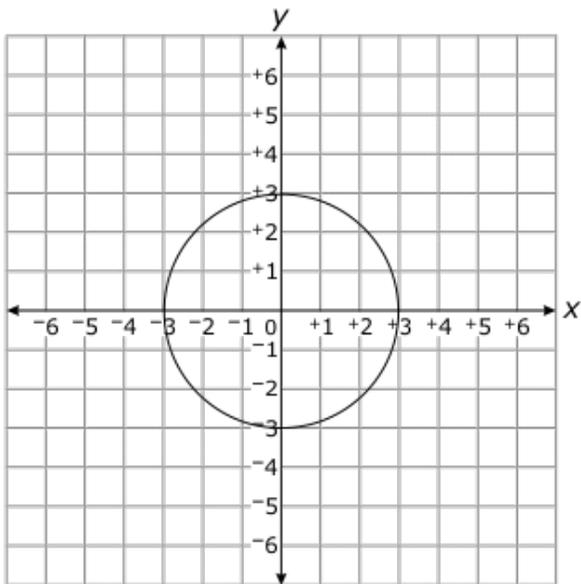
- A. $\{(1, -4), (2, 4), (1, 4), (2, -4)\}$
- B. $\{(0, 1), (0, 2), (0, 3), (0, 4)\}$
- C. $\{(-5, 5), (-4, 4), (-3, 3), (-2, 2)\}$
- D. $\{(3, 4), (6, 8), (4, 10), (3, 7)\}$

64. In which graph is y a function of x ?

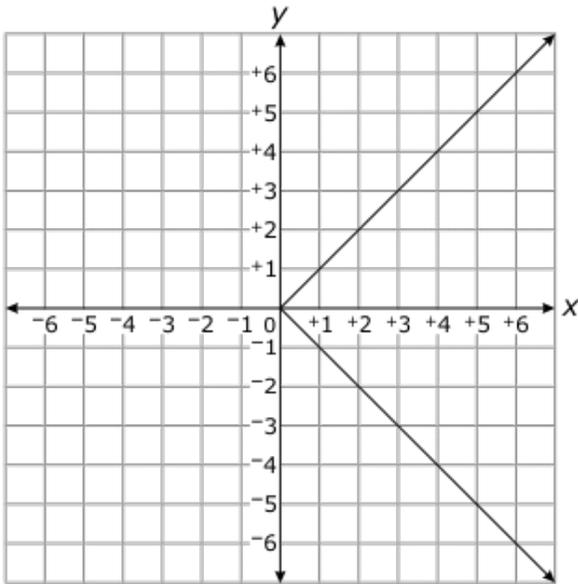
A.



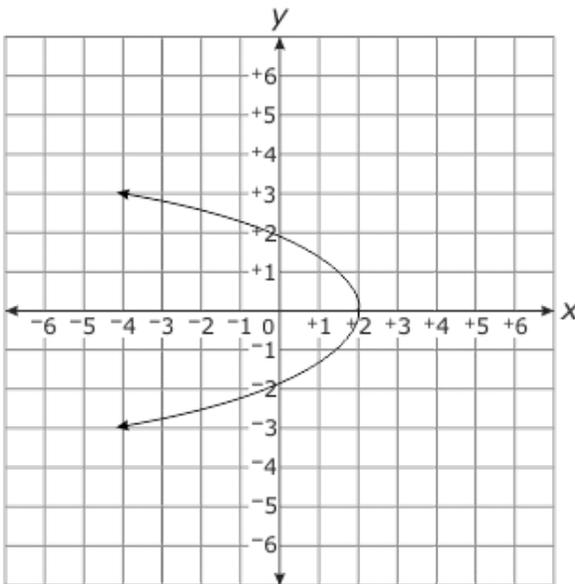
B.



C.



D.



65. A line that passes through the point $(-3, -6)$ has a slope of $\frac{4}{3}$. Which is another point on this line?

- A. $(0, -6)$
- B. $(1, -3)$
- C. $(3, 3)$
- D. $(6, 6)$

66. Which is the equation of a line that passes through the point $(-1, -6)$ and has a slope of -4 ?

A. $y = -4x - 10$

B. $y = -4x - 6$

C. $y = -4x - 2$

D. $y = -4x - 1$

67. Which is an equation of the line that passes through the points $(2, 3)$ and $(14, -6)$?

A. $y = -\frac{3}{4}x + \frac{3}{2}$

B. $y = -\frac{3}{4}x + \frac{9}{2}$

C. $y = -\frac{4}{3}x + 6$

D. $y = -\frac{4}{3}x + \frac{17}{3}$

68. Which equation is non-linear?

A. $8.5y = 0.1x - 16$

B. $xy = 30$

C. $2y = 5x - 19$

D. $x = 9y - 4$

69. Which function represents the data in the table below?

x	y
-2	-12
-1	-9
0	-6
1	-3
2	0

A. $y = 3x + 2$

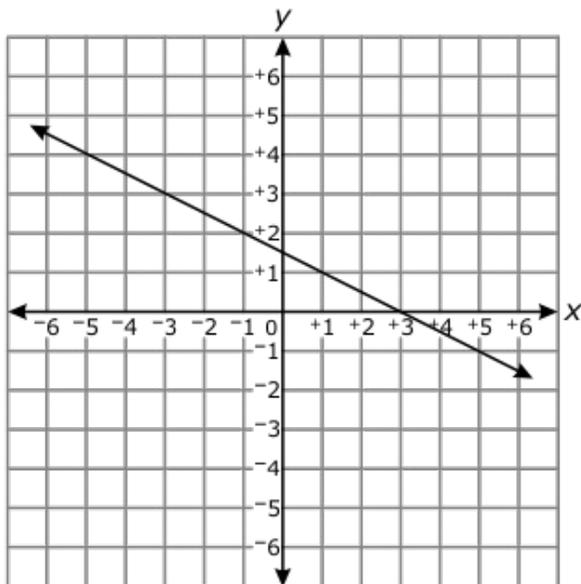
B. $y = 3x - 6$

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

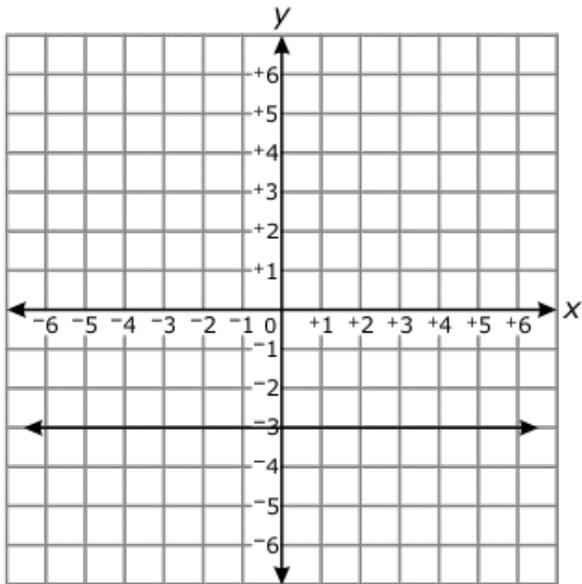
D. $y = \frac{1}{3}x - 6$

70. Which graph is **not** a function?

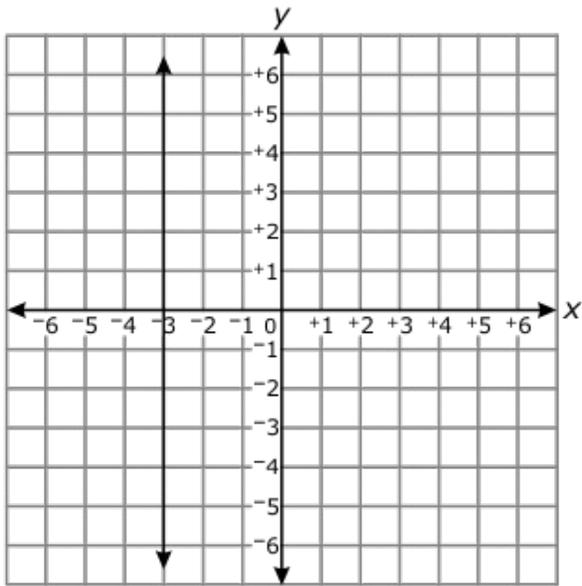
A.



B.



C.



71. In which table is y **not** a function of x ?

A.

x	y
0	1
1	2
2	3
3	4

B.

x	y
2	3
2	4
2	5
2	6

C.

x	y
3	5
4	5
5	5
6	5

72. Which table represents a function?

A.

x	y
0	2
2	6
3	8
2	-3

B.

x	y
6	0
6	1
6	2
6	3

C.

x	y
7	1
8	2
9	3
10	4

73. The relation below is a function.

x	y
-3	3
0	6
2	0
x	-3

Which is a possible value for x ?

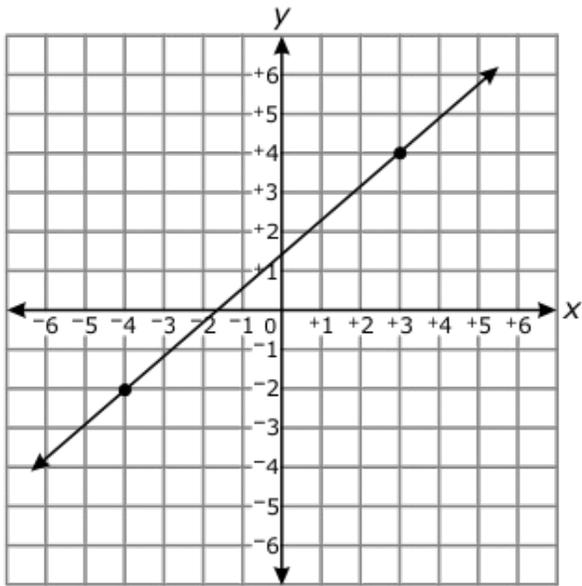
A. 5

B. 0

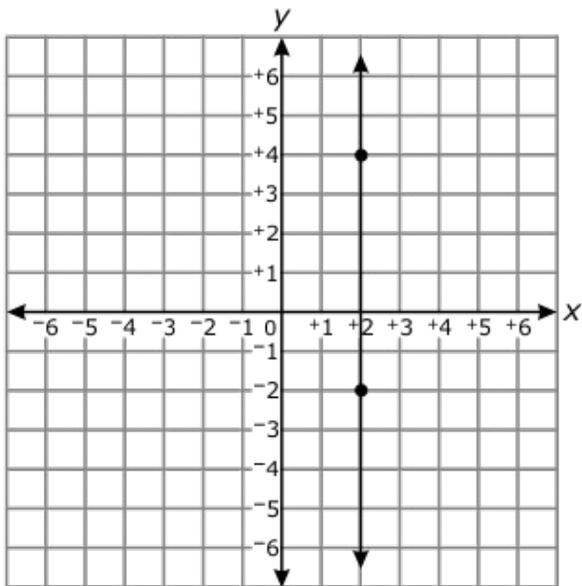
C. -3

74. In which graph is y a function of x ?

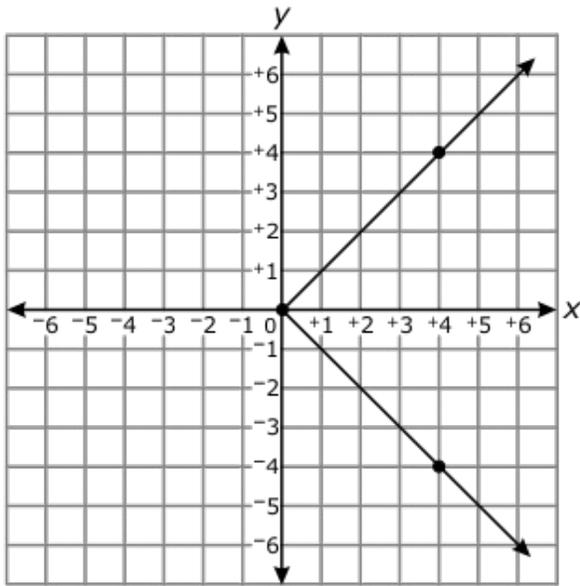
A.



B.



C.

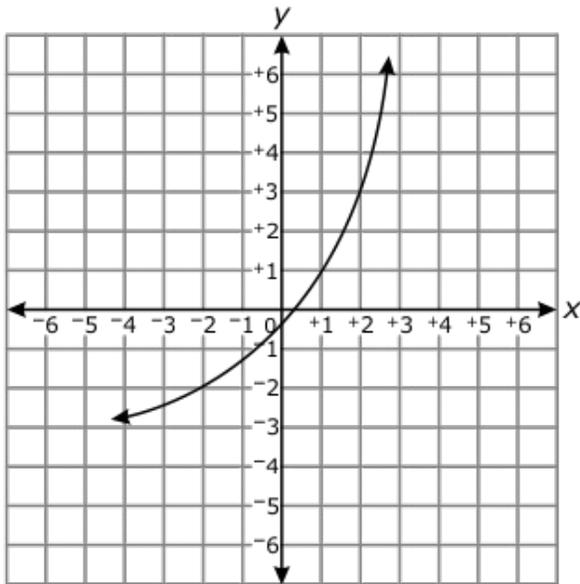


75. In which set of ordered pairs is y **not** a function of x ?

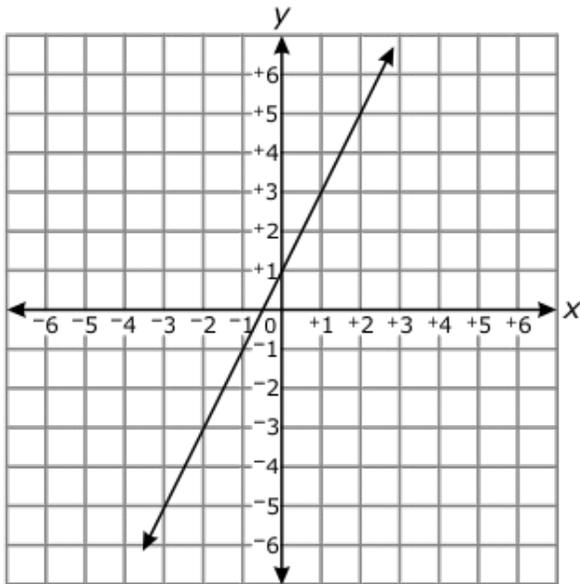
- A. $\{(3, 5), (3, 6), (3, 7)\}$
- B. $\{(2, 4), (3, 4), (4, 4)\}$
- C. $\{(2, 2), (3, 3), (4, 4)\}$

76. Which graph displays a nonlinear function?

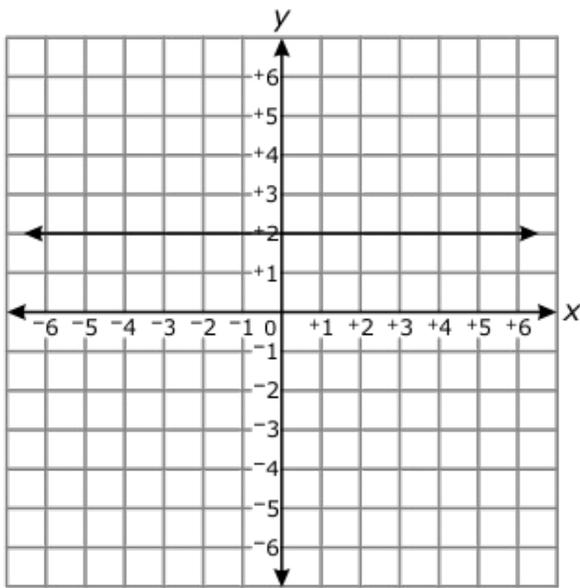
A.



B.



C.



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

A. $y = |2x|$

B. $y = 2x$

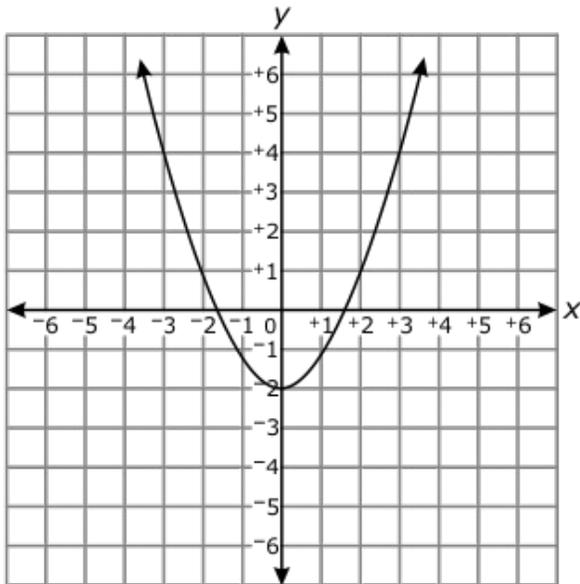
C. $y = \frac{x}{2}$

78. Which set of points is linear?

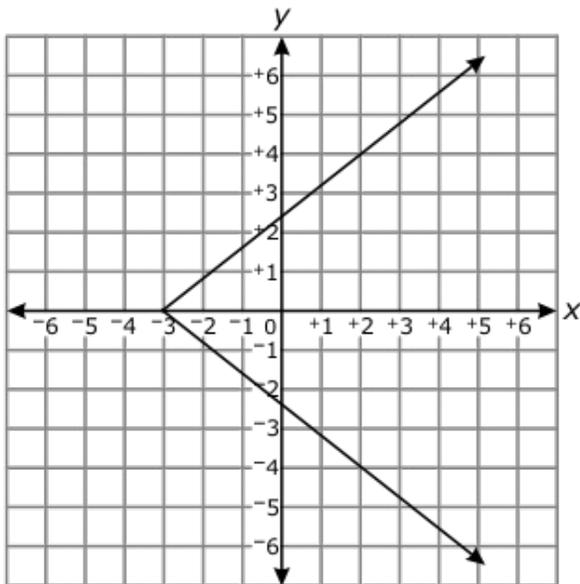
- A. $\{(1, 2), (2, 3), (3, 6), (4, 5)\}$
- B. $\{(1, 4), (2, 6), (3, 8), (4, 10)\}$
- C. $\{(1, 6), (2, 9), (3, 10), (4, 15)\}$

79. Which graph displays a linear function?

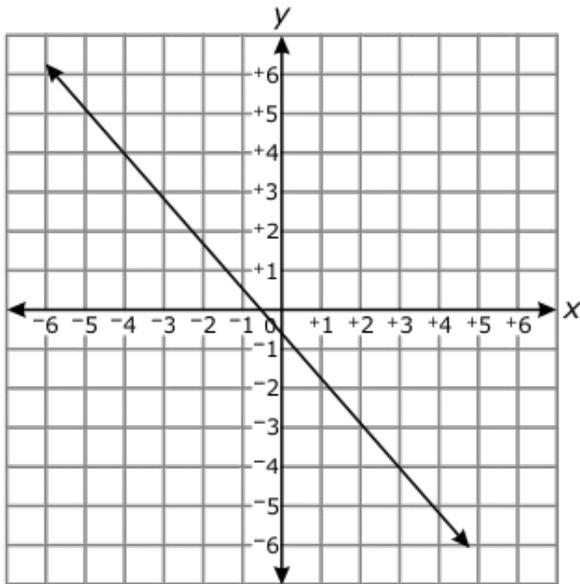
A.



B.



C.



80. The cost to rent a moving truck, y , includes a fee for renting the truck, plus a charge for the number of miles, x , the truck is driven.

- Jamie rents a moving truck, drives it 250 miles, and pays \$195.
- Chris rents the same truck, drives it 150 miles, and pays \$145.

Which equation represents the cost to rent the moving truck for x miles?

- A. $y = 2x + 70$
- B. $y = 0.50x + 70$
- C. $y = 0.50x + 45$

81. Pizza Shack uses the equation $y = 1.50x + 8$ to calculate the cost, y , of a large pizza with x toppings. Pizza Palace uses the table below to calculate the cost of a large pizza.

Number of Toppings (x)	Cost of Pizza (y)
2	\$11.00
4	\$15.00
6	\$19.00

What is the difference in the price of a large pizza with no toppings at the two pizza restaurants?

- A. \$0.50
- B. \$1.00
- C. \$2.00

82. Darrell's Plumbing charges customers using the equation $y = 25x + 55$, where x is the number of hours it takes to complete the work. Hannah's Plumbing charges customers using the chart below.

Hours Worked (x)	Customer Charge (y)
1	\$70
3	\$130
5	\$190

Which statement is true?

- A. Darrell's Plumbing charges \$5 more per hour than Hannah's Plumbing.
 - B. Hannah's Plumbing charges \$5 more per hour than Darrell's Plumbing.
 - C. Darrell's Plumbing charges \$10 more per hour than Hannah's Plumbing.
83. Which relation is linear?
- A. $\{(-1, -3), (2, 3), (5, 9)\}$
 - B. $\{(-2, 5), (-1, 2), (0, 1)\}$
 - C. $\{(2, 2), (3, 7), (4, 14)\}$
84. Which relation is nonlinear?
- A. $\{(-2, 1), (-4, 0), (-6, -1)\}$
 - B. $\{(-3, -3), (-1, 1), (0, 3)\}$
 - C. $\{(-1, -3), (0, -5), (2, -10)\}$

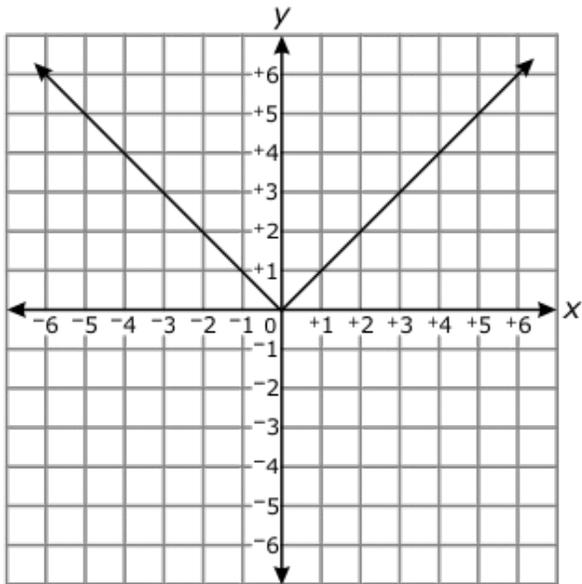
85. Darrell and Abigail are both walking dogs over the summer to earn money.
- Darrell earns \$2 for the first dog and \$1.50 for each additional dog he walks.
 - Abigail uses the table below to calculate her earnings.

Number of Dogs (x)	Earnings (y)
2	\$3.75
4	\$7.25
5	\$9.00

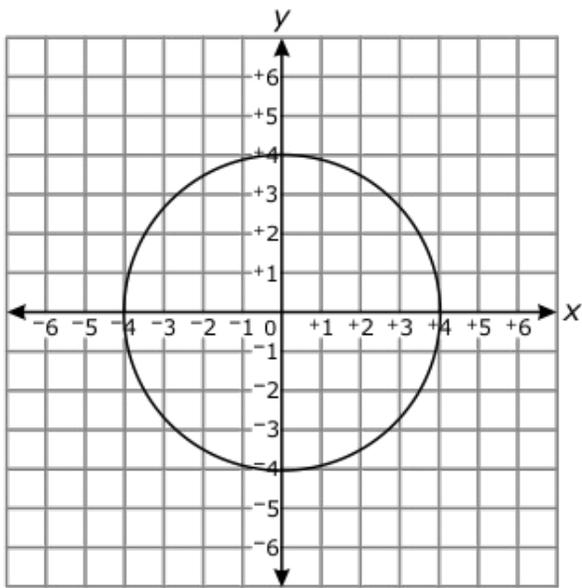
Who earns more for walking 3 dogs and how much more?

- A. Darrell earns \$0.50 more than Abigail.
 - B. Abigail earns \$0.50 more than Darrell.
 - C. Abigail earns \$0.25 more than Darrell.
86. Which equation is a function?
- A. $y^2 = x + 5$
 - B. $x = 5$
 - C. $y = 2$
87. In which graph is y **not** a function of x ?

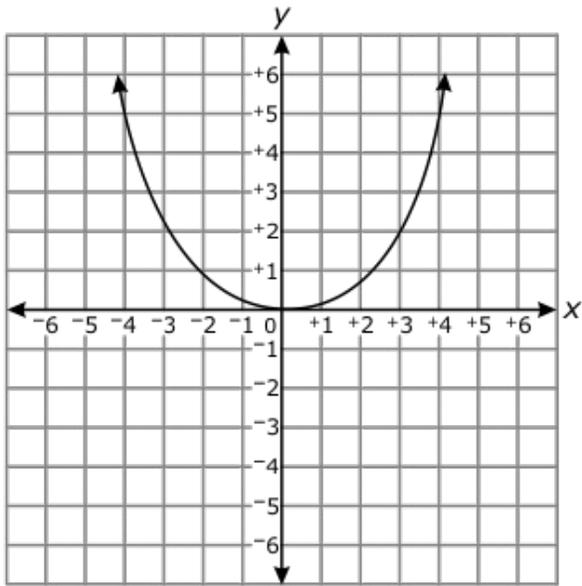
A.



B.

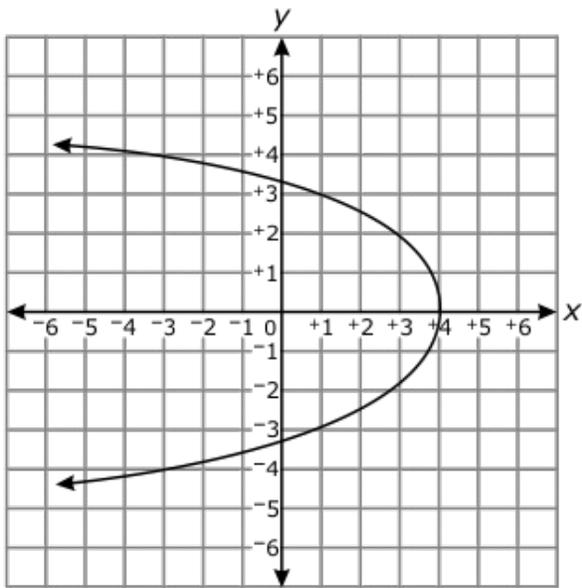


C.

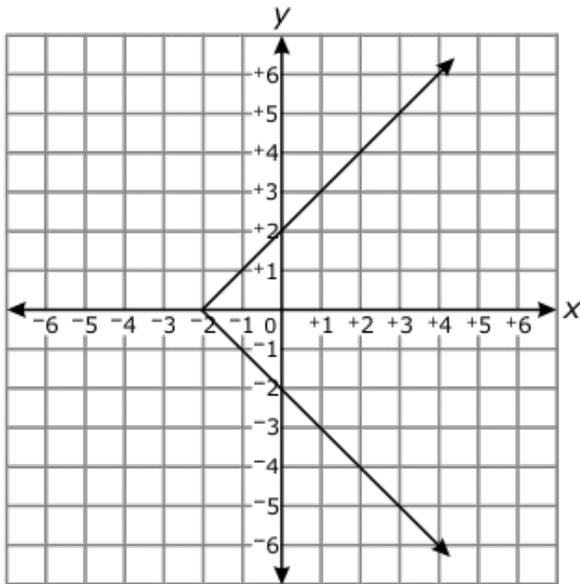


88. In which graph is y a function of x ?

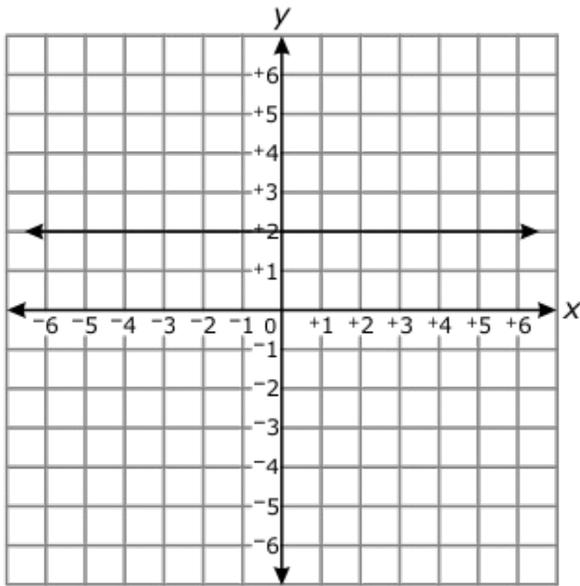
A



B.



C.



89. Which relation is **not** a function?

- A. $\{(0, -2), (0, 1), (0, 3)\}$
- B. $\{(3, 2), (4, 2), (5, 2)\}$
- C. $\{(-1, 1), (0, -1), (1, 1)\}$

90. Parker and Avery are saving money.

- Parker can calculate his savings using the equation $y = 10x + 50$, where y is his total savings and x is the number of weeks he has been saving.
- Avery's savings are shown in the table below.

Weeks Saved (x)	Total Savings (y)
5	\$105
10	\$180
15	\$255

Which statement is true?

- A. Avery saves \$5 more per week than Parker.
- B. Parker saves \$5 more per week than Avery.
- C. Avery saves \$15 more per week than Parker.

91. Emma and Olivia give piano lessons.

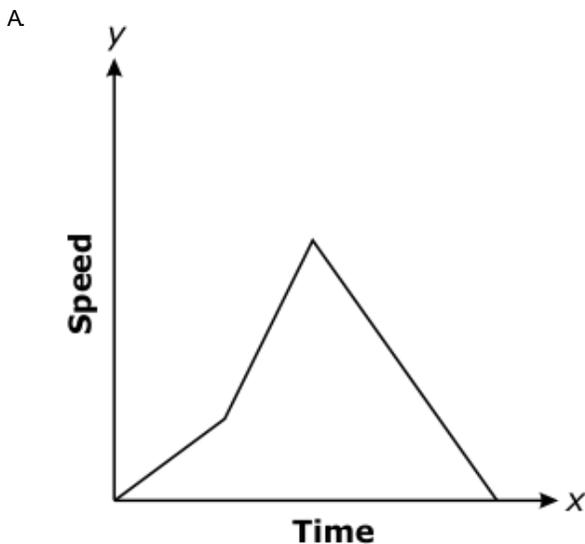
- They each charge a flat rate for materials, plus an hourly rate for a lesson.
- Emma earns \$20 for 1 hour of piano lessons, or \$50 for 4 hours of piano lessons.
- Olivia uses the table below to calculate her earnings from piano lessons.

Olivia's Earnings

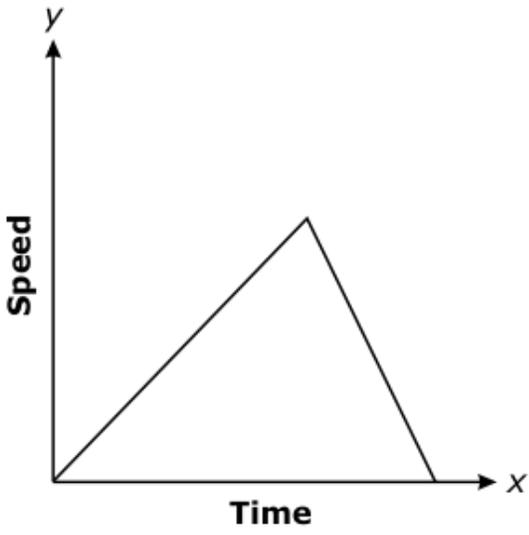
Hours of Piano Lessons (x)	Earnings (y)
2	\$35
4	\$65

Which statement is true?

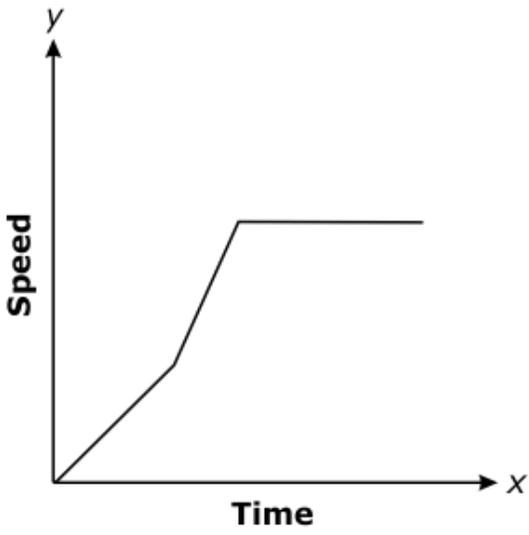
- A. Emma earns \$15 more per hour than Olivia.
 - B. Emma earns \$5 more per hour than Olivia.
 - C. Olivia earns \$5 more per hour than Emma.
92. Leaving his house, Calvin drives slowly through his neighborhood. He then speeds up as the road widens. As Calvin approaches a red light, he slows down and then stops. Which graph **best** represents this scenario?



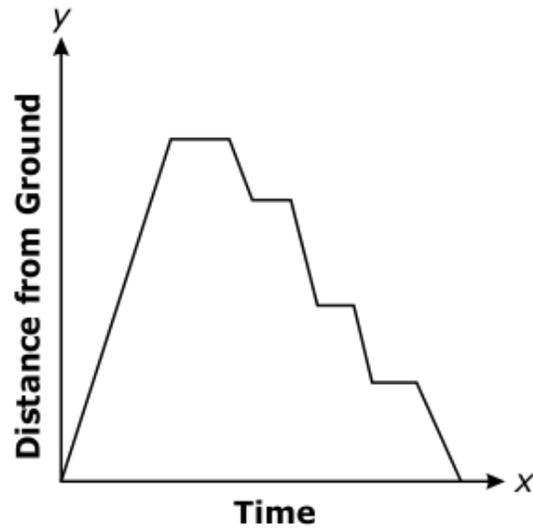
B.



C.



93. Which scenario **best** represents the graph below?



- A A person riding an elevator up, and then down.
- B A person riding an escalator up, and then riding another escalator down.
- C A ball being thrown in the air, hitting the ground, and then bouncing multiple times.

94. Which table shows a nonlinear function?

A.

x	y
0	4
2	8
4	12
6	16

B.

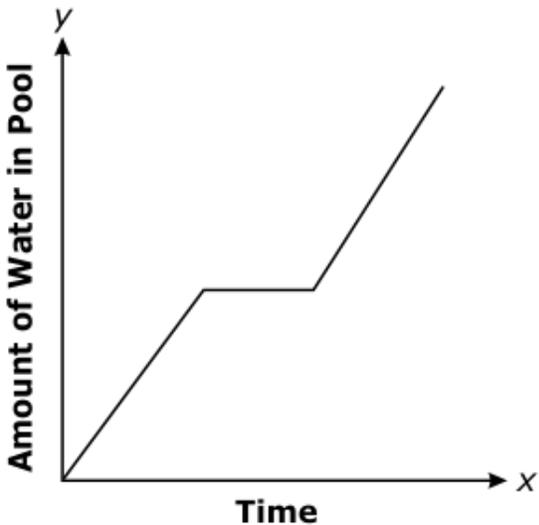
x	y
0	5
2	8
4	11
6	14

C.

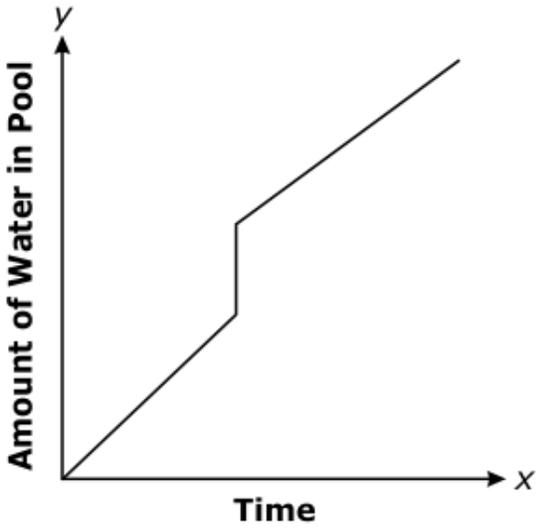
x	y
0	2
2	5
4	7
6	12

95. Haley is filling up a small swimming pool with a water hose. She turns on the water to start filling the pool, turns off the water to get a snack, then comes back and finishes filling the pool. Which graph **best** represents this scenario?

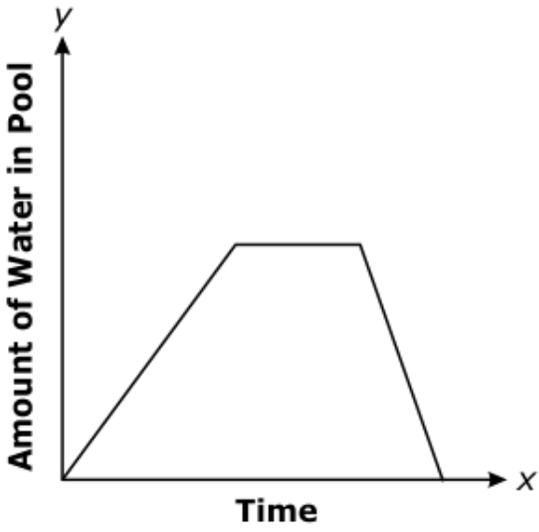
A.



B.



C.



96. Which set of the data shows a linear function?

A.

x	y
2	6
4	18
6	24
8	36

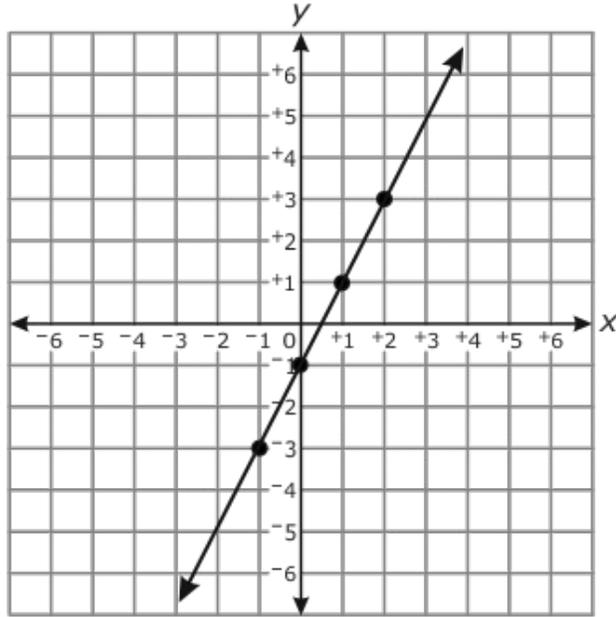
B.

x	y
3	15
5	30
7	45
8	50

C.

x	y
2	8
4	15
6	22
8	29

97. Function P is represented by the equation $y = 2x + 3$. Function Q is shown on the graph below.



Which statement is true?

- A. Function P has a greater slope than function Q .
 - B. Function P has the same y -intercept as function Q .
 - C. Function P has the same slope as function Q .
98. The equation of function E is $y = 3x + 6$. Function G contains the points in the table below.

x	y
0	4
1	6
3	10

What is the difference between the slopes of the two functions?

- A. 1
- B. 2
- C. 3

99. The equation of function W is $y = 3x - 2$. Function Z contains the points in the table below.

x	y
1	4
3	10
5	16

Which is true about the two functions?

- A. The slope of function W is greater than the slope of function Z .
 - B. The slope of function Z is greater than the slope of function W .
 - C. The y -intercept of function Z is greater than the y -intercept of function W .
100. Which equation fits the data in the table below?

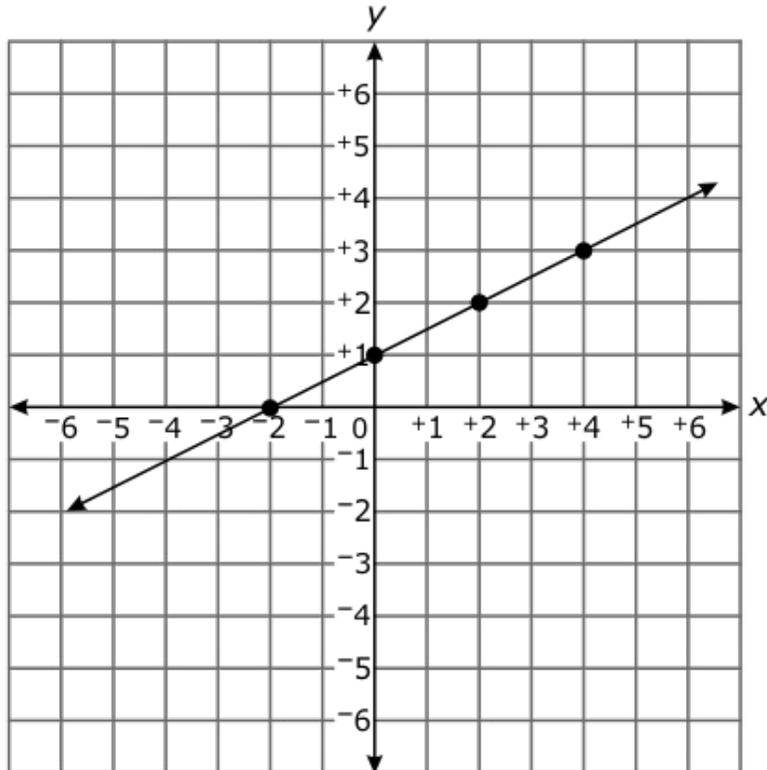
x	y
-4	-9
-1	-3
4	7
6	11
8	15

- A. $y = 2x - 1$
- B. $y = x + 7$
- C. $y = -2x + 1$

101. Function R contains the points in the table.

x	y
2	0
4	2
6	4

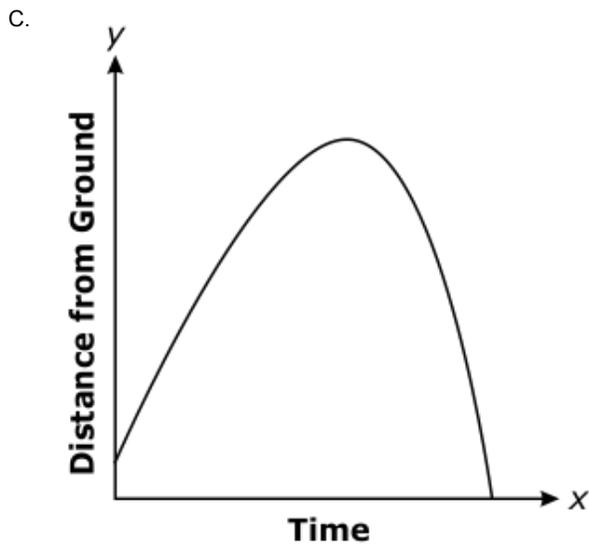
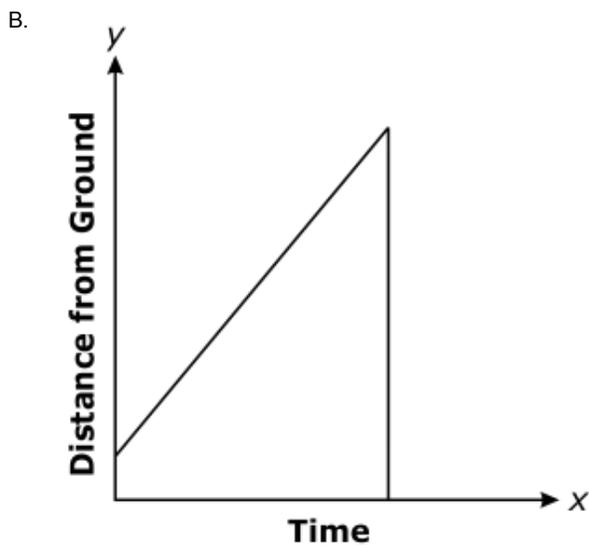
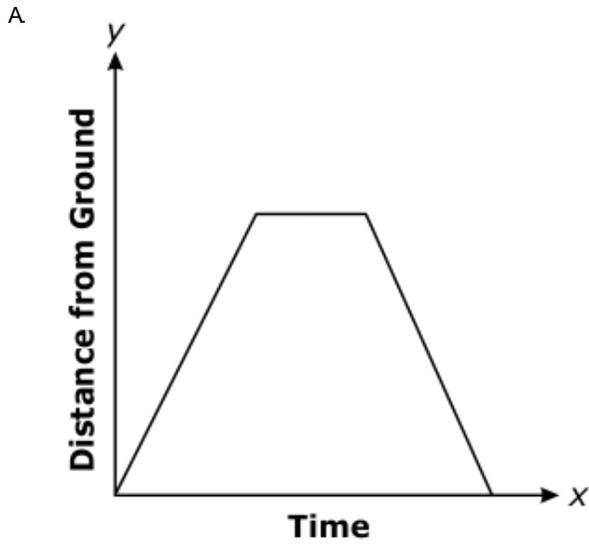
Function S is shown on the graph below.



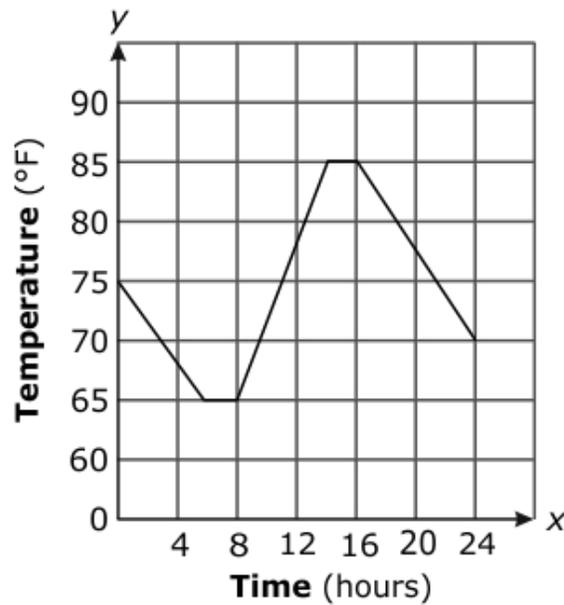
Which statement is true?

- A. The slopes of functions R and S are the same.
- B. The slope of function R is greater than the slope of function S .
- C. The y -intercept of function R is greater than the y -intercept of function S .

102. Daniel threw a ball into the air and it landed on the ground about 50 feet from where he stood. Which graph **best** represents this scenario?



103. The graph below shows the change in temperature, beginning at midnight, for a 24-hour period.



Based on the graph, which statement is true?

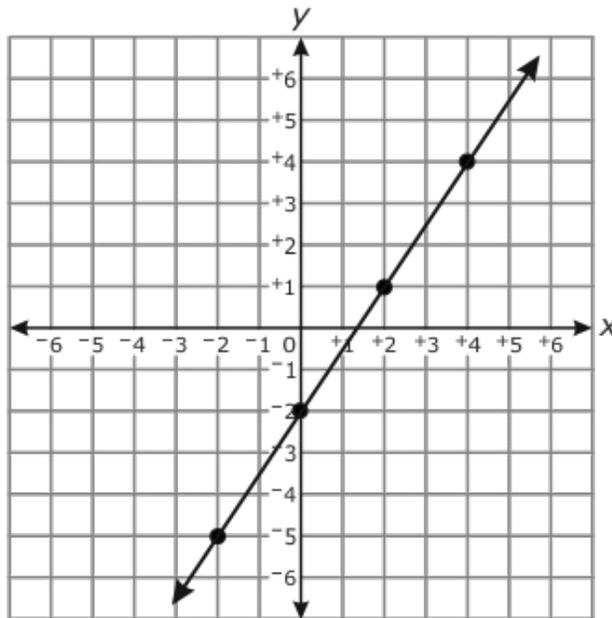
- A. The temperature increased and decreased at the same rate all day.
- B. The difference between the high and low temperature for the day was 20° .
- C. The temperature was warmer at the end of the 24-hour period than when the day began.

104. The table and graph below represent two different functions.

Function 1

x	y
4	5
6	7
8	9

Function 2



What is the difference in the y -intercepts of the two functions?

- A. 2
- B. 3
- C. 4

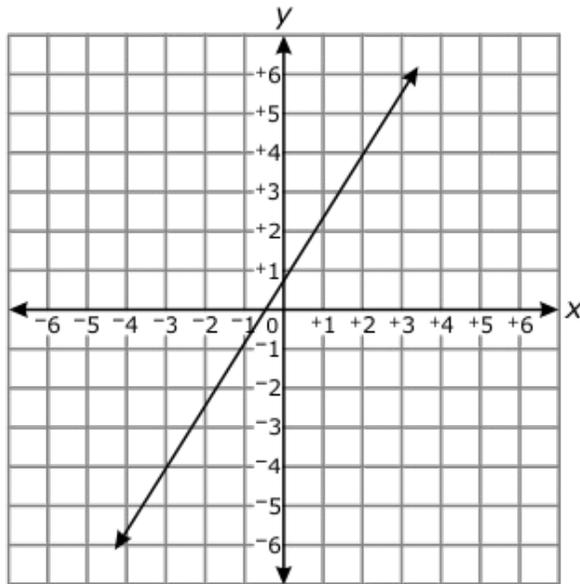
105. Which equation fits the data in the table below?

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

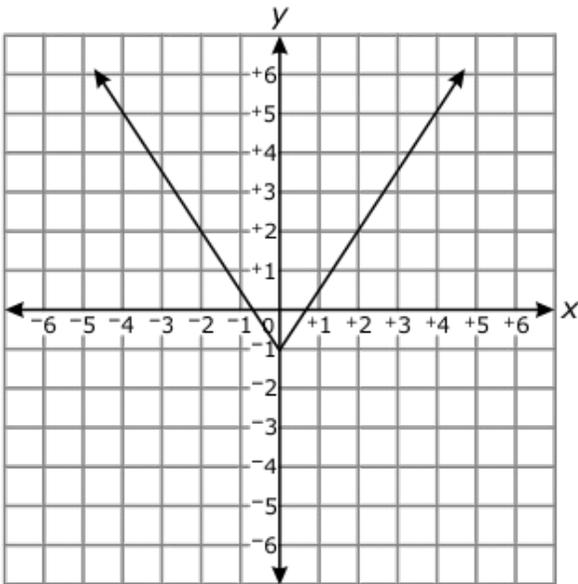
- A. $y = -3x + 1$
- B. $y = x + 5$
- C. $y = 2x + 1$

106. In which graph is y a linear function of x ?

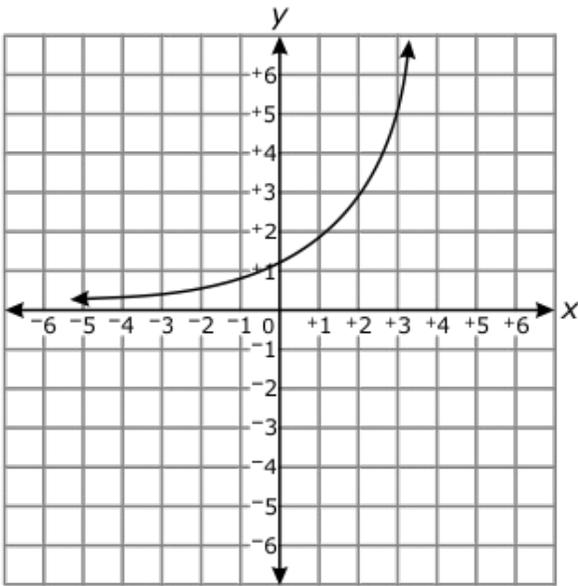
A.



B.



C.



107. What is the equation for a line that goes through the point (2, 4) and a y-intercept of 2?

- A. $y = 2x + 2$
- B. $y = 2x$
- C. $y = x + 2$

108. What is the equation of the line that goes through the points (2, -1) and (6, 1)?
- A $y = 2x - 1$
 - B $y = \frac{1}{2}x - 2$
 - C $y = -2x + 3$
109. What is the equation of a line that has a slope of $-\frac{1}{2}$ and passes through the point (-4, 6)?
- A $y = -\frac{1}{2}x + 8$
 - B $y = -\frac{1}{2}x + 6$
 - C $y = -\frac{1}{2}x + 4$
110. Which is an equation of a line that passes through the point (-2, 5) and has a slope of -3?
- A $y = -3x + 5$
 - B $y = -3x - 1$
 - C $y = -2x - 3$
111. Which is an equation of a line that passes through the point (-1, -5) and has a slope of 3?
- A $y = 3x - 2$
 - B $y = 3x - 5$
 - C $y = 3x - 8$

112. Which is an equation of a line that contains the points $(-3, 2)$ and $(3, 0)$?

A. $y = -3x + 2$

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

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

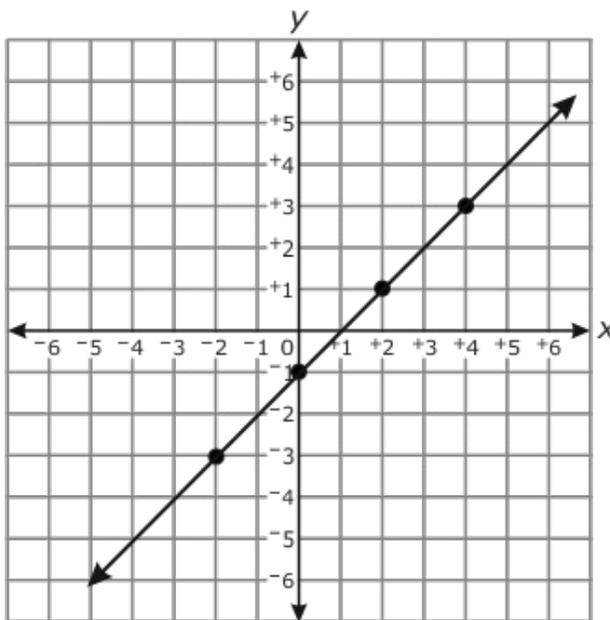
113. Which is an equation of a line with a y -intercept of -3 and passes through the point $(1, 0)$?

A. $y = 3x - 3$

B. $y = x - 3$

C. $y = -3x - 3$

114. Function M is represented by the equation $y = 5x + 2$. Function N is shown on the graph below.



What is the difference in the y -intercepts of the two functions?

A. 2

B. 3

C. 4

115. Two dance companies charge a registration fee plus an additional cost per hour of instruction. Company A uses the equation $c = 75 + 22.5t$ to determine the total cost for t hours of instruction. The table below shows how much Company B charges for different hours of instruction.

Hours of Instruction (t)	Total Monthly Cost (c)
1	\$85.00
4	\$160.00
7	\$235.00

Bonnie wants to sign her daughter up for 8 hours of instruction. Which statement is true?

- A. Company A will be \$2.50 cheaper than Company B.
 - B. Company A will be \$5.00 cheaper than Company B.
 - C. Company A will be \$10.00 cheaper than Company B.
 - D. Company A will be \$25.00 cheaper than Company B.
116. Which equation is a linear function?
- A. $y = 7x + 4$
 - B. $y = 2 - 2x^5$
 - C. $y = 8^2 + 2x^2$
 - D. $y = 6.5 - 2.67x^4$
117. Jesse's Catering charges a flat delivery fee of \$30, plus \$15.25 per person served. Bob's Catering uses the equation $C = 12.50 + 17.60p$ to determine the cost to serve p people. An office building needs to cater a meal for 20 people. Which statement is true?
- A. Jesse's Catering will cost \$27.15 more than Bob's Catering.
 - B. Jesse's Catering will cost \$27.15 less than Bob's Catering.
 - C. Jesse's Catering will cost \$29.50 more than Bob's Catering.
 - D. Jesse's Catering will cost \$29.50 less than Bob's Catering.

118. Two barrels are full of water. A 55-gallon barrel was emptied at a rate of $2\frac{1}{2}$ gallons per minute. A second barrel was emptied at a constant rate according to the table below.

Number of Minutes	Gallons Remaining
2	53
5	42.5
7	35.5
10	25

Which statement is true?

- A. The first barrel is larger and is emptied at a faster rate.
 - B. The second barrel is larger and is emptied at a faster rate.
 - C. The first barrel is larger and the second barrel is emptied at a faster rate.
 - D. The second barrel is larger and the first barrel is emptied at a faster rate.
119. Rodney's Roller Rink uses the equation $y = 10x + 75$ to determine the cost for a birthday party with x children. The table below shows the cost that Sara's Skate Palace charges for a party with different numbers of children.

Number of Children	Total Cost
5	\$120
8	\$156
15	\$240

Which statement is true?

- A. Rodney's Roller Rink charges \$2 more per child than Sarah's Skate Palace.
- B. Rodney's Roller Rink charges \$2 less per child than Sarah's Skate Palace.
- C. Rodney's Roller Rink charges \$14 more per child than Sarah's Skate Palace.
- D. Rodney's Roller Rink charges \$14 less per child than Sarah's Skate Palace.

120. Perry's Plumbing uses the equation $y = 45x + 35$ to determine the cost for x hours of service. The table below shows the cost that Hannah's Home Repair charges for different hours of service.

Hours (x)	Total Cost (y)
2	\$125
4	\$225
5	\$275

Which statement is true?

- A. Perry's Plumbing charges \$5 less per hour than Hannah's Home Repair.
 - B. Perry's Plumbing charges \$10 less per hour than Hannah's Home Repair.
 - C. Perry's Plumbing charges \$15 less per hour than Hannah's Home Repair.
 - D. Perry's Plumbing charges \$17.50 less per hour than Hannah's Home Repair.
121. The set of data in the table below represents a linear function.

x	y
2	2
3	4
4	6

Which is an equation for this function?

- A. $y = x + 1$
- B. $y = 2x - 2$
- C. $y = 3x - 4$

122. In which table is y a function of x ?

A.

x	y
-3	5
-5	7
-7	9
-7	11

B.

x	y
-6	2
-10	3
-10	4
-12	5

C.

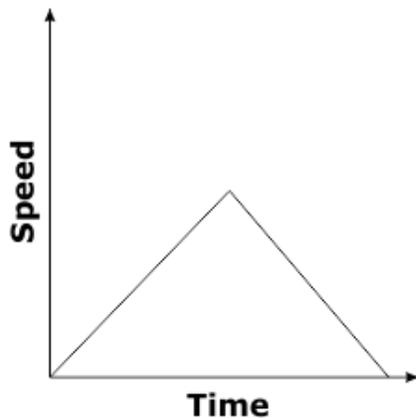
x	y
-2	15
-2	16
-4	17
-4	18

D.

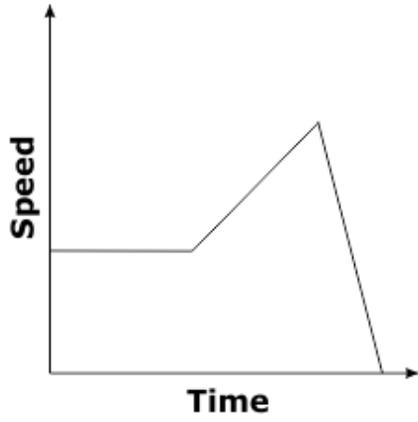
x	y
-10	1
-7	1
-6	2
-2	3

123. Adrian rode his bike at a constant speed until coming to a stop. He then increased his speed at a constant rate until slowing down and stopping. Which graph could model Adrian's bike ride?

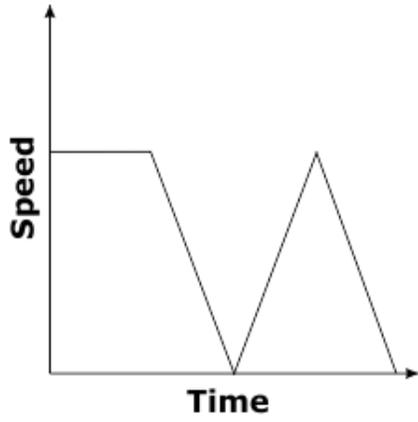
A.



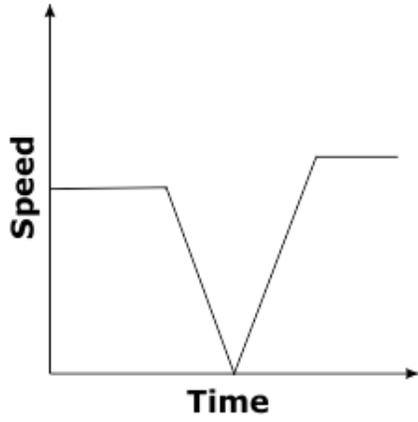
B.



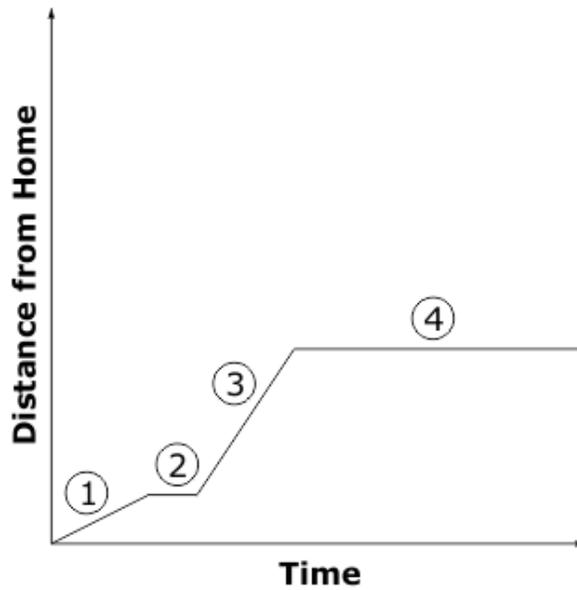
C.



D.



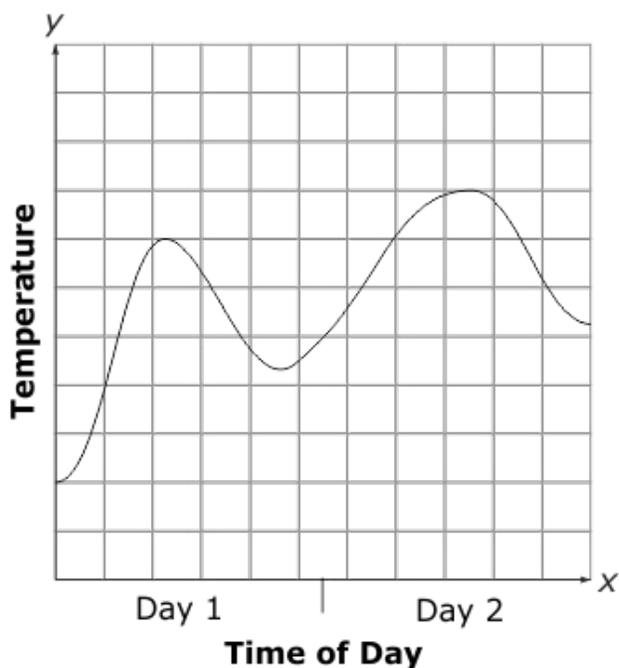
124. Mrs. Fiely went to the grocery store. Her distance from home to the grocery store is displayed in the graph below.



Which statement is true?

- A. The grocery store is located at the top of a hill.
- B. Mrs. Fiely had to stop once before she made it to the grocery store.
- C. In section 3, Mrs. Fiely is driving more slowly than she was during section 1.
- D. In section 4, Mrs. Fiely returned home from the grocery store.

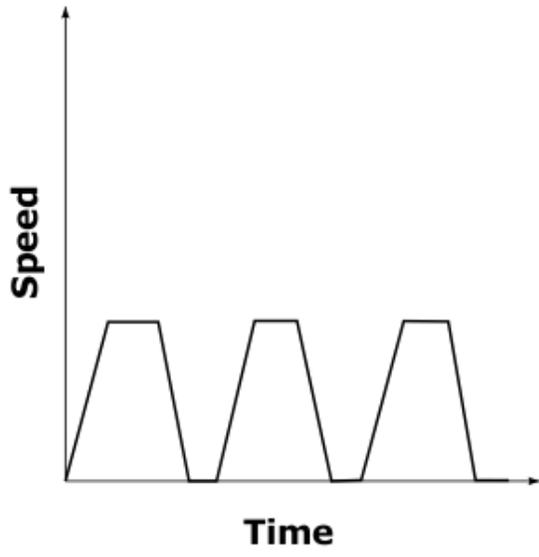
125. The graph below displays the temperature highs and lows over a 2-day period.



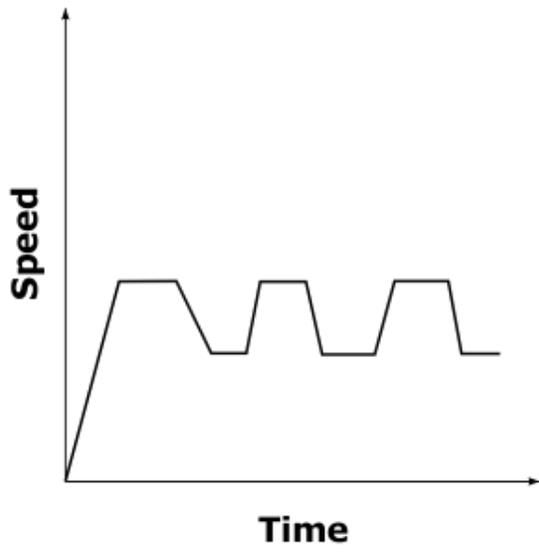
Which statement is true?

- A. Day 2 had a lower temperature than Day 1.
 - B. Day 1 had a higher temperature than Day 2.
 - C. Day 1 got warmer faster than Day 2.
 - D. Day 1 ended cooler than it began.
126. A bus drives through Washington, D.C., allowing visitors to get off and on at various museums and monuments. Which graph **best** represents this situation?

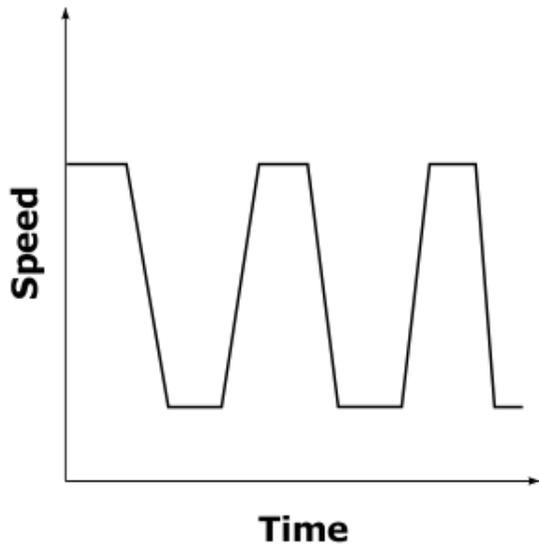
A.



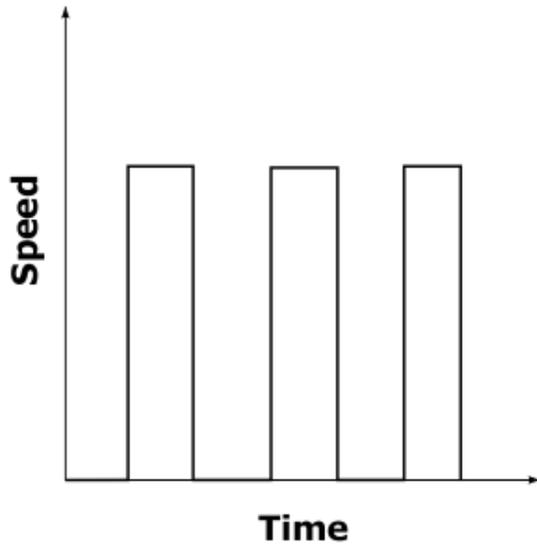
B.



C.

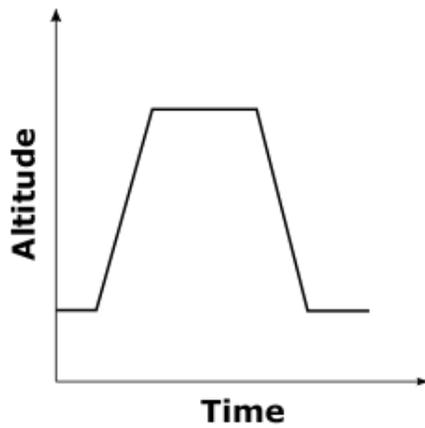


D.

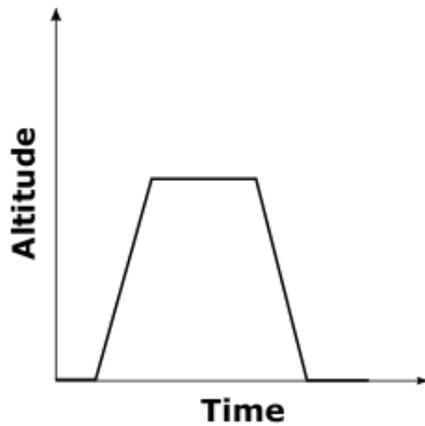


127. An airplane taxis from the terminal and takes off for a town. It travels at a constant speed before descending. The plane lands and taxis to the other terminal to allow passengers to exit the plane. Which graph below **best** represents this situation?

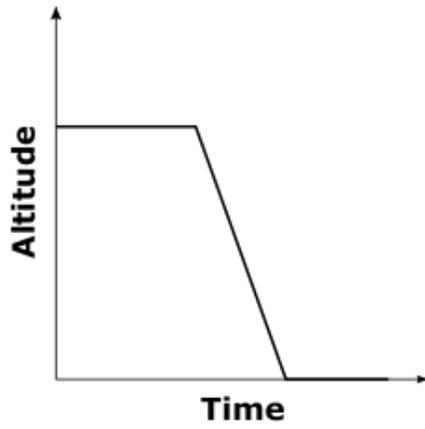
A.



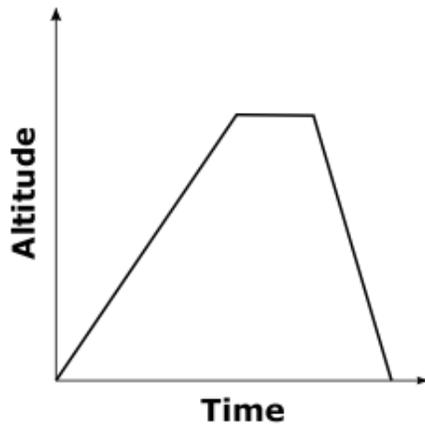
B.



C.

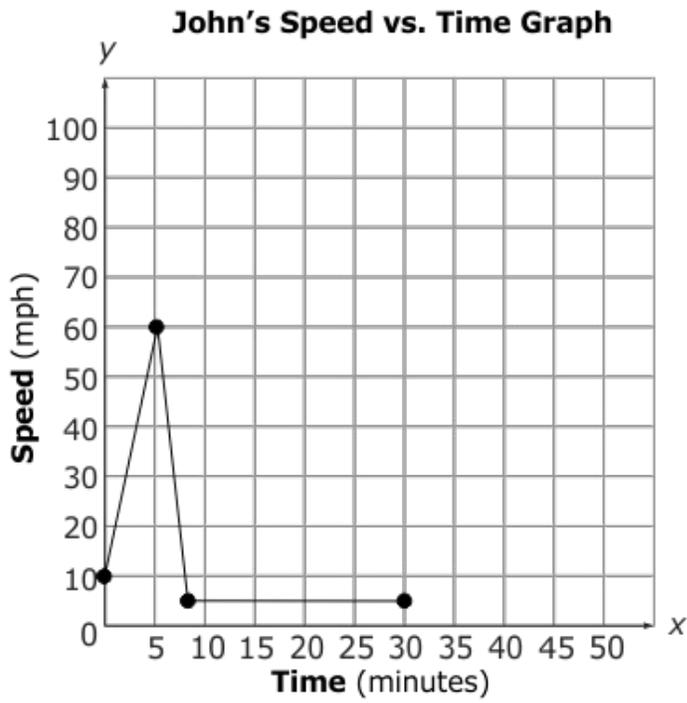


D.

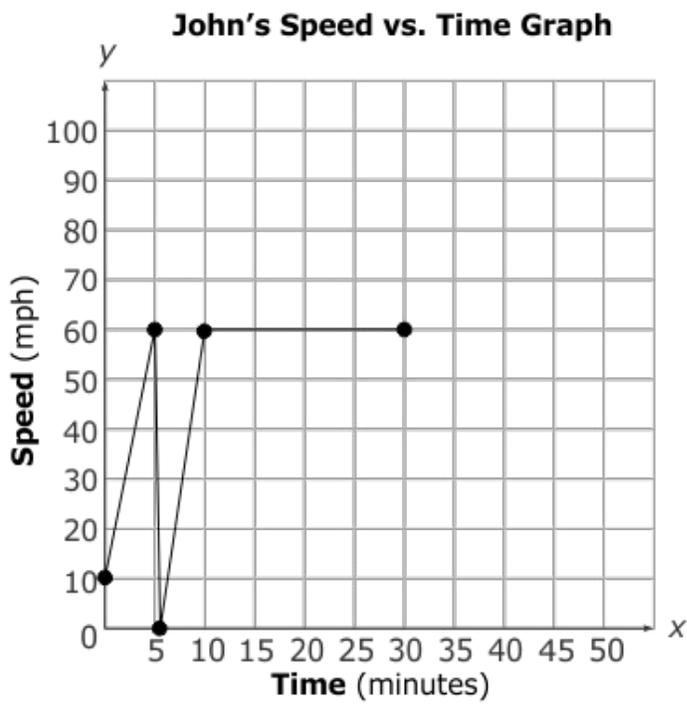


128. As John was driving his boat, he sped up to get to the intercoastal waterway. When he got there, he turned off the motor and began floating while he was fishing. Which graph **best** represents this scenario?

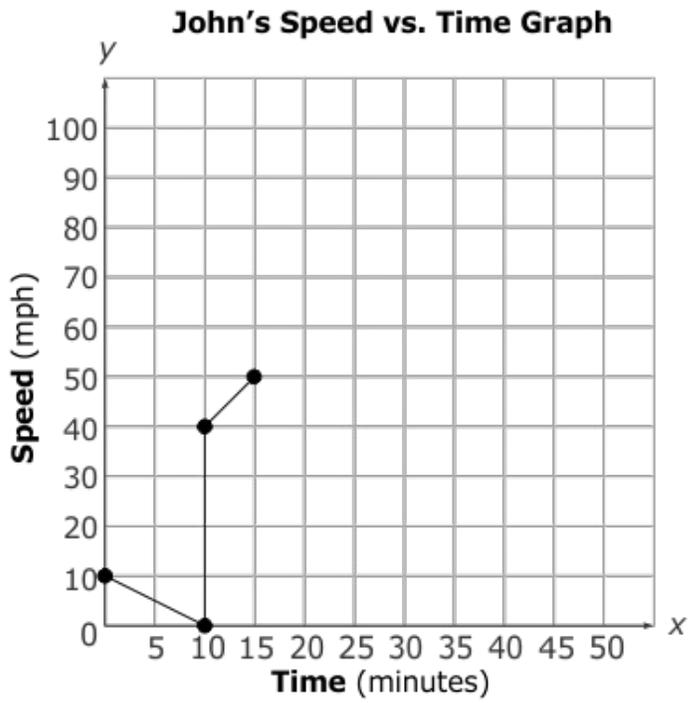
A.



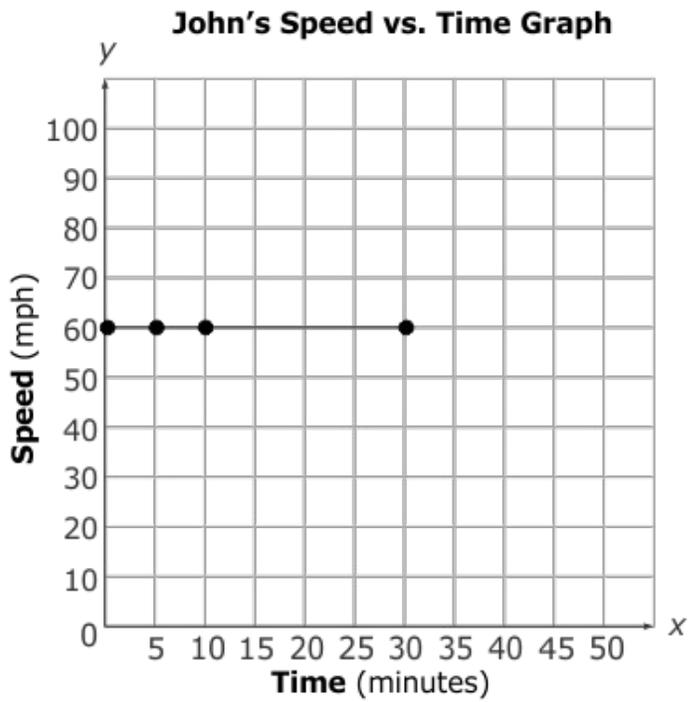
B.



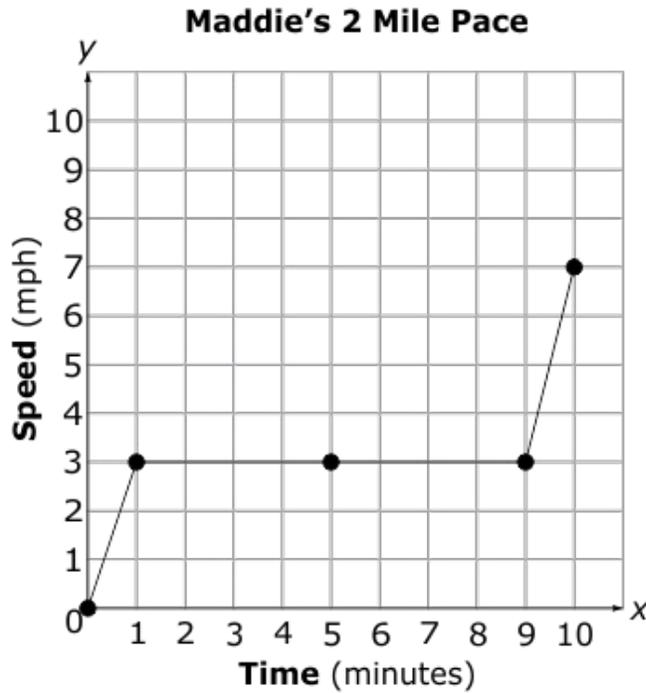
C.



D.

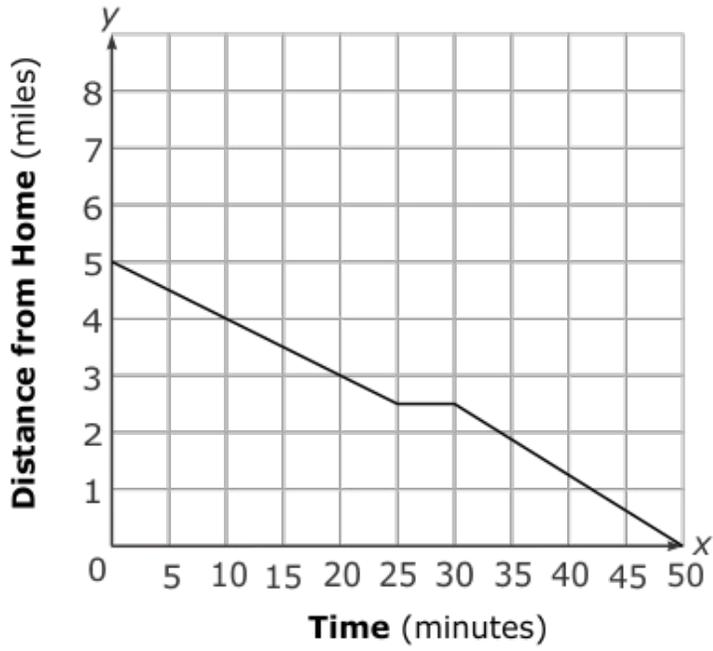


129. Which statement **best** describes the graph below?

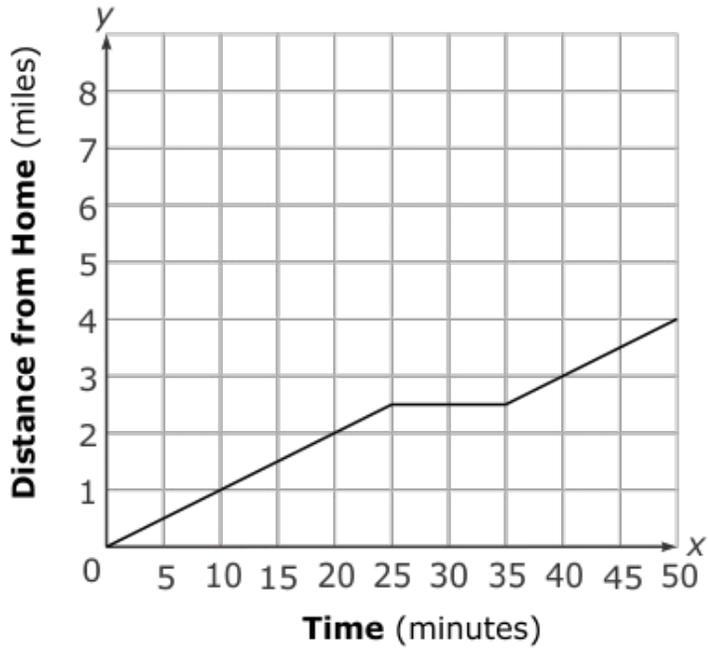


- A. Maddie warms up by increasing her walking speed. She stops walking for 8 minutes, then increases her speed to running for the final minute.
 - B. Maddie warms up by increasing her walking speed. She stays at a constant pace for 8 minutes, then increases her speed to running for the final minute.
 - C. Maddie walks up a hill for 1 minute. She walks on a flat surface for 8 minutes, then she walks up a steeper hill for the last minute.
 - D. Maddie runs for 1 minute. She stops for 8 minutes, then she runs for 1 more minute.
130. Sam leaves the park to walk home, but about halfway there he stops to talk to a friend. After talking to a friend for 5 minutes Sam continues home. Which graph represents Sam's walk home from the park?

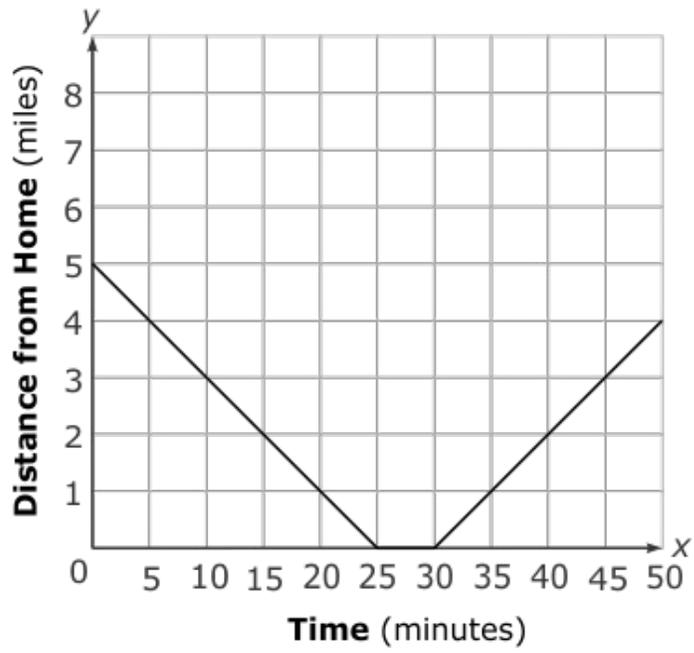
A.



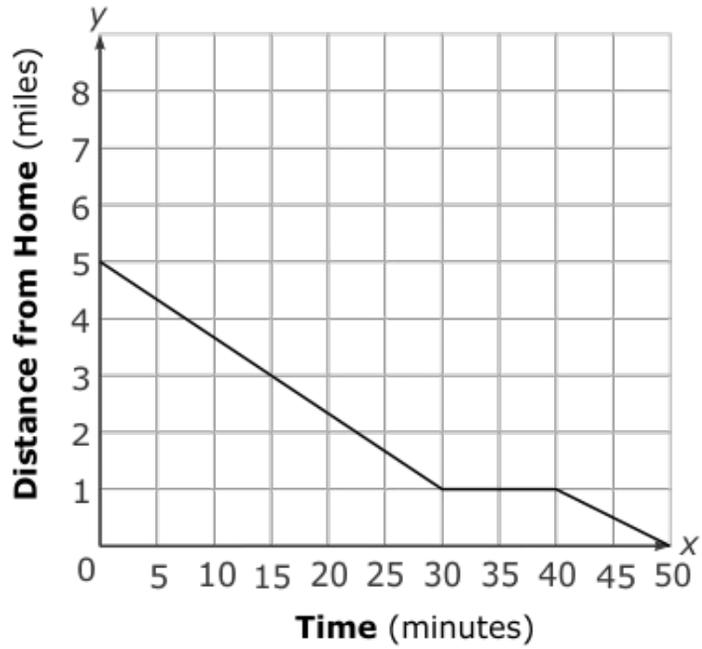
B.



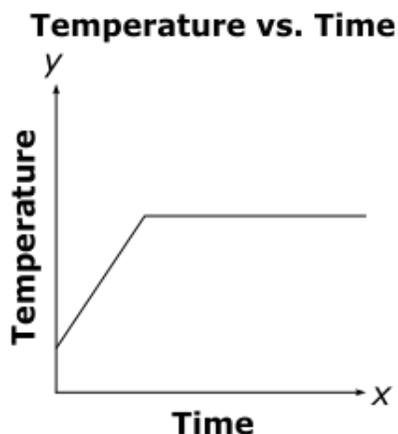
C.



D.



131. The graph below represents temperature over a set amount of time.



Which scenario is **best** modeled on the graph?

- A. A cake is taken out of a hot oven, placed on a table to cool, and then placed in the freezer.
 - B. A pie is taken out of the freezer, placed on a table to thaw, and then placed in a hot oven.
 - C. A cake is taken out of a hot oven and placed on a table to cool.
 - D. A pie is taken out of the freezer and placed on a table to thaw.
132. Paul's Pizza shop uses the equation $y = 1.25x + 10$ to calculate the cost of a large cheese pizza with x toppings. The table below shows the cost for a large cheese pizza with different numbers of toppings at Pizza House.

Number of Toppings	Cost of Pizza
2	\$13
4	\$16
6	\$19

Which statement is true?

- A. Paul's Pizza charges \$1.00 more per topping than Pizza House.
- B. Paul's Pizza charges \$1.00 less per topping than Pizza House.
- C. Paul's Pizza charges \$0.25 more per topping than Pizza House.
- D. Paul's Pizza charges \$0.25 less per topping than Pizza House.

133. Michael's computer company charges \$90 to make a service call and \$35 per hour for any repairs that need to be completed. The table below shows the total amount Jason's computer company charges for different hours of service.

Number of Hours (x)	Total Cost (y)
2	\$165.00
4	\$265.00
6	\$365.00

How much less does Jason's company charge for a service call than Michael's company?

- A. \$10
 - B. \$25
 - C. \$40
 - D. \$50
134. A restaurant listed its prices for a medium pizza based on the number of toppings in the table below.

Number of toppings	Cost
2	\$13.80
4	\$18.60
5	\$21.00

Based on the table, what is the cost for a medium pizza with 1 topping?

- A. \$6.90
- B. \$9.00
- C. \$9.30
- D. \$11.40

135. The cost to take a taxi includes a flat rate, plus a charge for the number of miles the taxi travels.

- Tori takes a taxi 12 miles and pays \$23.00.
- Evan takes the same taxi 18 miles and pays \$32.00.

Which equation represents the cost to take a taxi for x miles?

- A. $y = 1.92x$
- B. $y = 1.78x$
- C. $y = 1.50x + 9$
- D. $y = 1.50x + 5$

136. Kelly bought a used car that had already been driven for a number of miles.

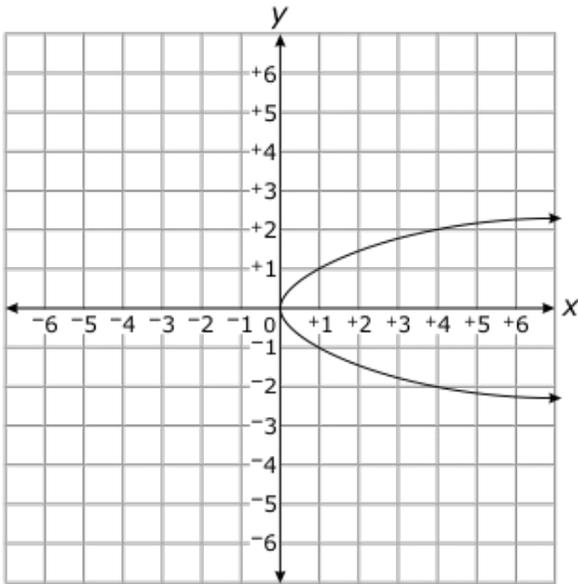
- After Kelly owned the car for 1 year, the car had been driven a total of 24,050 miles.
- After Kelly owned the car for 4 years, the car had been driven a total of 48,800 miles.

Assuming Kelly drives the car the same number of miles each year, how many total miles will the car have been driven after 7 years?

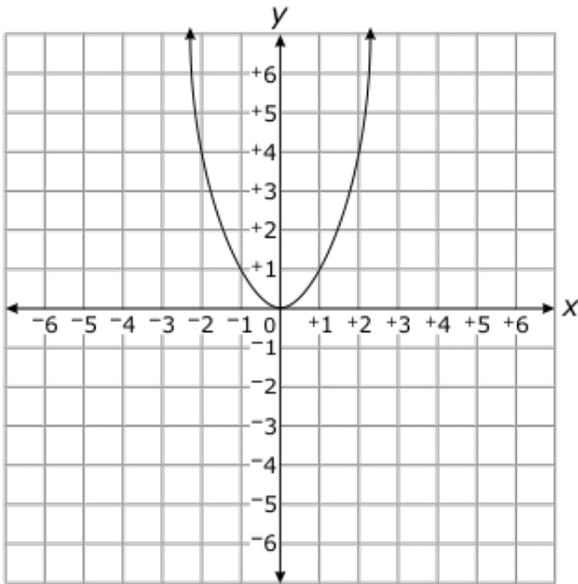
- A. 81,800
- B. 73,550
- C. 67,350
- D. 57,750

137. Which relation is a function?

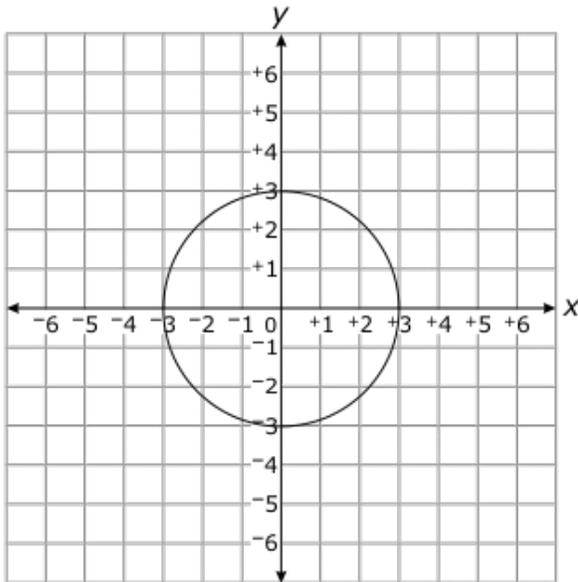
A.



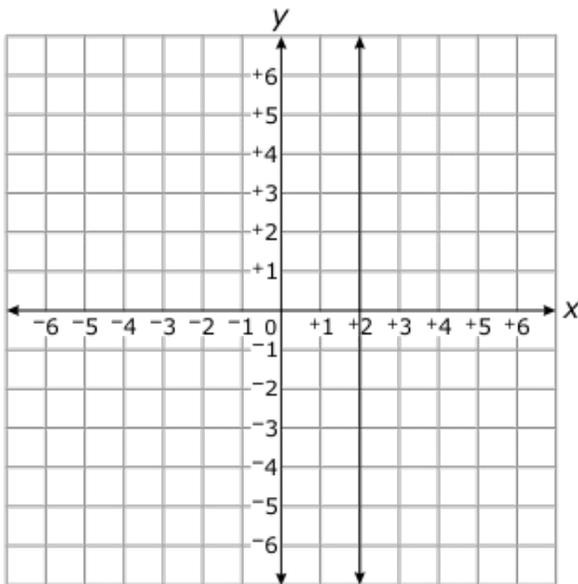
B.



C.



D.



138. Which relation is a function?

- A. $\{(-2, 1), (0, 0), (0, 4), (2, 1)\}$
- B. $\{(3, 2), (4, 2), (5, 2), (6, 2)\}$
- C. $\{(-4, 3), (-4, 1), (-4, 0), (-4, -1)\}$
- D. $\{(1, 4), (3, 3), (4, 3), (4, 2)\}$

139. In which table is y a function of x ?

A.

x	y
3	14
3	5
6	7
8	13

B.

x	y
0	-1
1	-1
2	0
3	1

C.

x	y
7	2
8	0
8	-2
9	-4

D.

x	y
1	14
1	13
1	12
1	11

140. For the relation $\{(6, 4), (4, 2), (2, 0), (x, -2)\}$ to be a function, x can be which value?

A. 0

B. 2

C. 4

D. 6

141. Which represents a function?

A.

x	y
5	10
5	15
5	20
5	25

B.

x	y
-1	-1
0	0
1	1
1	-1

C. $y^2 = x + 4$

D. $y = x^2 + 4$

142. The profit for Company X is \$110 when 10 pairs of shoes are sold, and \$470 when 20 pairs of shoes are sold. The profit, p , for Company Y is represented using the equation $p = 30s - 200$, where s represents the number of shoes sold. Which statement is true?

- A. Company X makes more money from each pair of shoes sold than Company Y.
- B. When 0 pairs of shoes are sold, Company X has a greater profit than Company Y.
- C. When 0 pairs of shoes are sold, Company X and Company Y have the same amount of profit.
- D. Company X and Company Y make the same amount of money from the sale of each pair of shoes.

143. Wanda makes cakes. She charges \$0.50 per person the cake is supposed to serve plus a \$25 decorating fee. Next month, she is changing her rates as described in the table below.

Number of People Served	Cost of Cake
50	\$60.00
75	\$77.50
80	\$81.00

Which statement is true?

- A. The decorating fee is increasing by \$10.
 - B. The decorating fee is increasing by \$15.
 - C. The cost per person served is increasing by \$0.20.
 - D. The cost per person served is increasing by \$0.70.
144. Which equation is non-linear?
- A. $y = 2x - 3$
 - B. $2x + 3y = 18$
 - C. $y - 2 = \frac{2}{3}(x + 6)$
 - D. $xy = 6$
145. In which equation is y a linear function of x ?

- A. $y = \frac{2}{x}$
- B. $y = \frac{x}{2}$
- C. $y = x^2$
- D. $y = \sqrt{2x}$

146. Which table of values represents a function?

A.

x	y
13	29
-6	-9
-8	-13
-8	19

B.

x	y
-5	7
-6	7
-7	12
-8	19

C.

x	y
0	2
0	0
-4	2
-6	0

D.

x	y
6	4
6	2
6	0
6	-2

147. Which equation is a linear function?

A.

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

B.

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

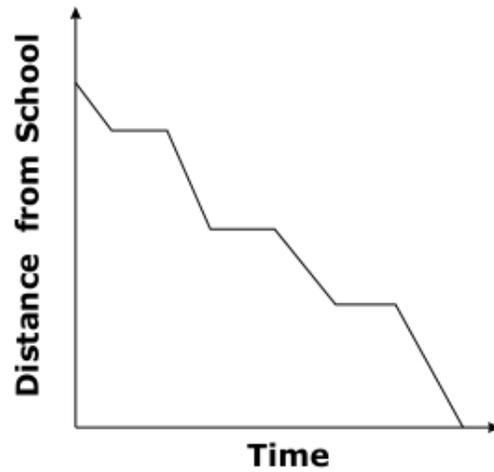
C.

$$y = 5x^2$$

D.

$$y = 5x^2 + 10$$

148. The graph below shows Haley's ride to school in the morning.

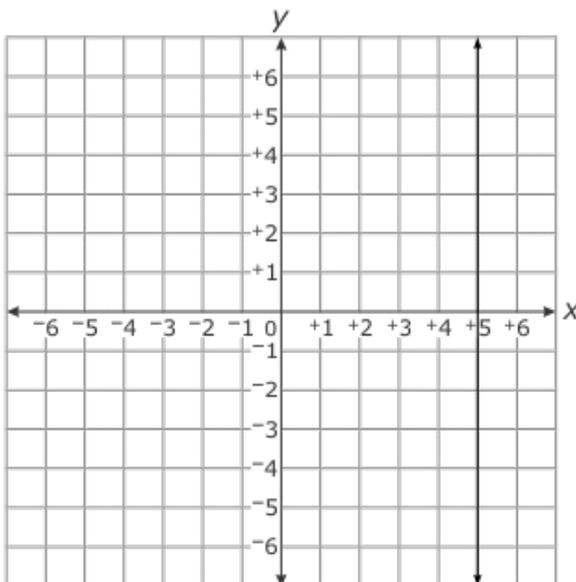


How many times did Haley stop on the way to school?

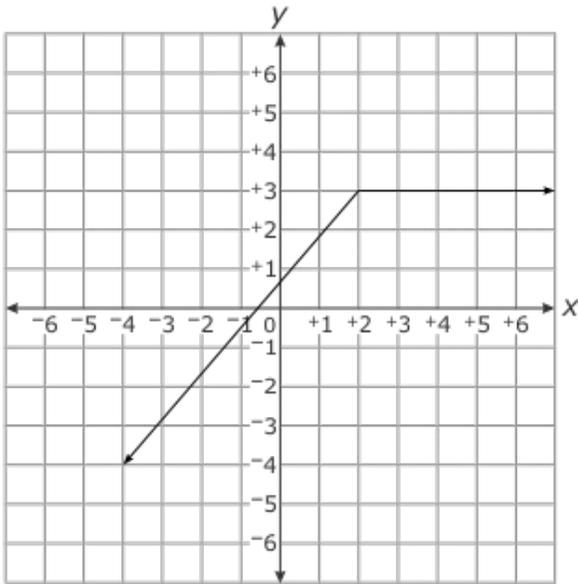
- A. 1
- B. 3
- C. 4
- D. 7

149. Which represents a linear function?

A.



B.



C.

x	y
-2	5
0	10
2	15
4	20
6	25

D.

x	y
-1	3
0	6
2	9
3	12
5	15

150. Which is a linear function?

A.

x	y
-2	2
-1	4
0	8
1	16
2	32

B.

x	y
-2	2
-1	5
0	8
1	11
2	14

C.

x	y
-2	2
-1	4
0	6
1	4
2	2

D.

x	y
-2	2
-1	3
0	5
1	8
2	12

151. Which equation is a non-linear function?

A. $y = 2.5x + 4$

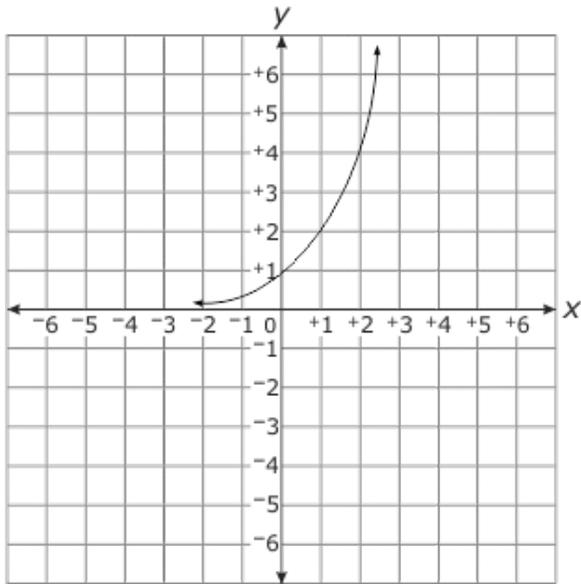
B. $y = 2^2 - 2x$

C. $y = 2 + 2x^2$

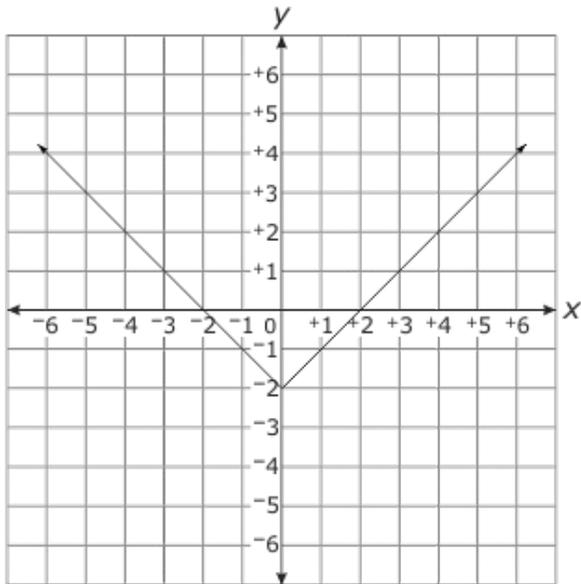
D. $y = 6.5 - 2x$

152. In which graph is y a linear function of x ?

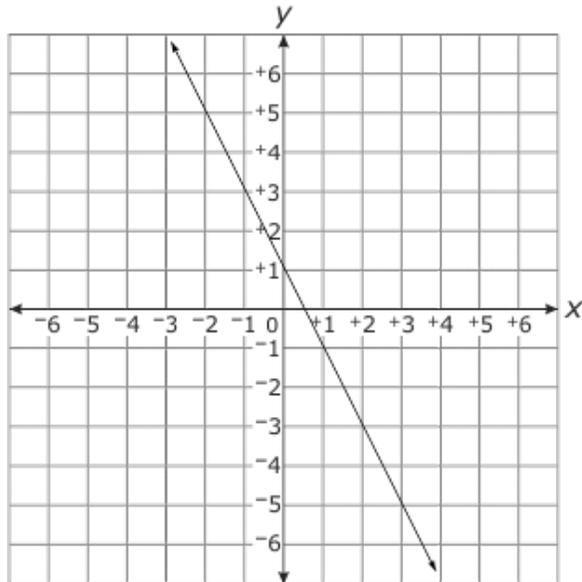
A.



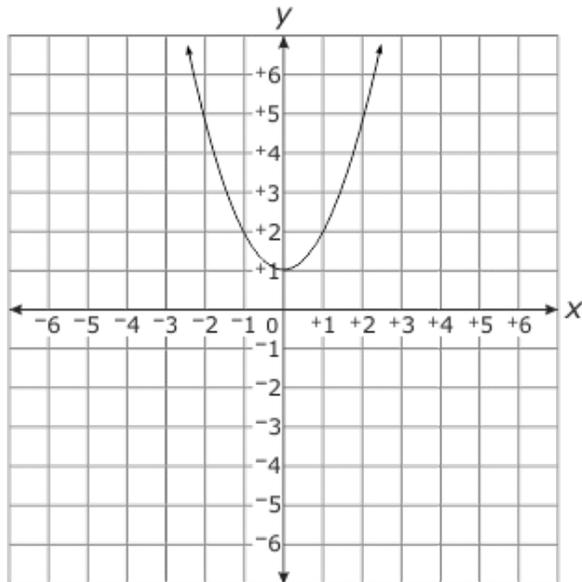
B.



C.



D.



153. Which relation is linear?

- A $\{(0, 1), (-1, 2), (2, 5), (3, 10)\}$
- B $\{(0, 0), (1, 1), (4, 2), (1, -1)\}$
- C $\{(-3, -1), (-1, 1), (1, 3), (3, 5)\}$
- D $\{(-4, 2), (4, -2), (-4, 3), (4, -3)\}$

154. Which is the equation of the line that goes through the points in the table below?

x	y
5	11
-5	-19
-10	-34

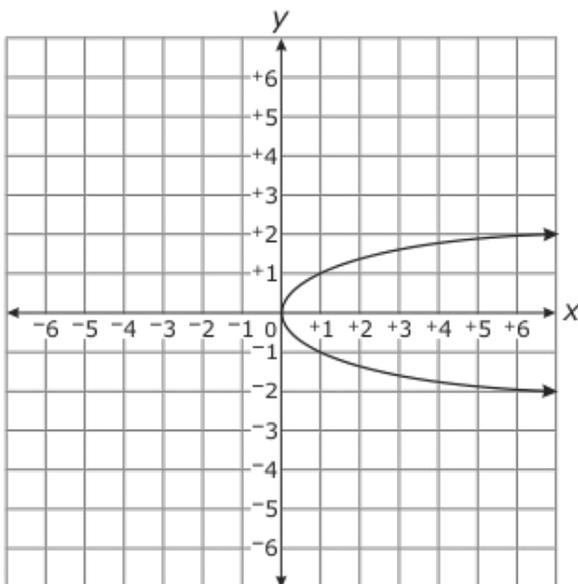
- A. $y = 0.8x + 7$
- B. $y = 1.25x + 4.75$
- C. $y = 2x + 1$
- D. $y = 3x - 4$

155. In which set of ordered pairs is y a function of x ?

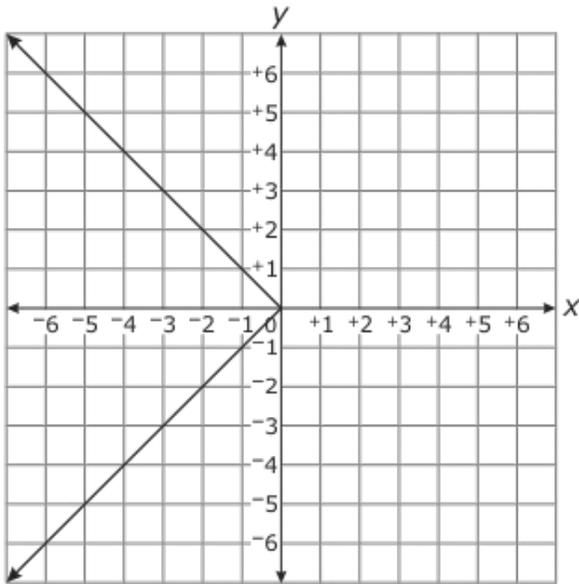
- A. $\{(8, 4), (5, -2), (6, 3), (2, 3), (4, -7)\}$
- B. $\{(4, 1), (-2, 3), (0, 5), (5, 0), (4, 3)\}$
- C. $\{(-3, 3), (1, 4), (-1, 1), (0, 3), (1, 2)\}$
- D. $\{(-1, 3), (0, 5), (2, 3), (5, -2), (2, 4)\}$

156. In which graph is y a function of x ?

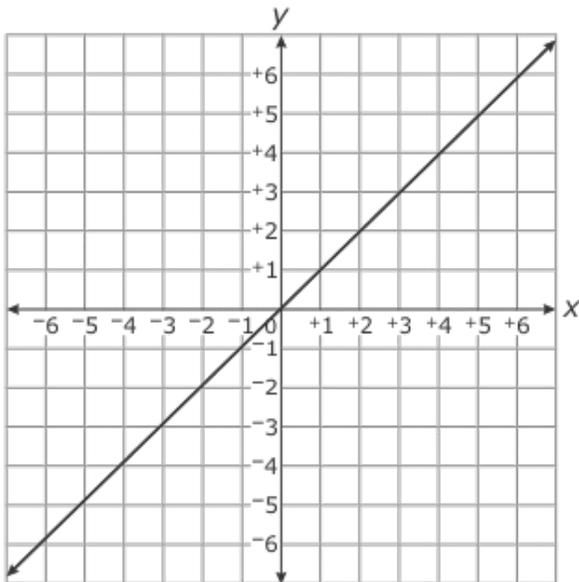
A.



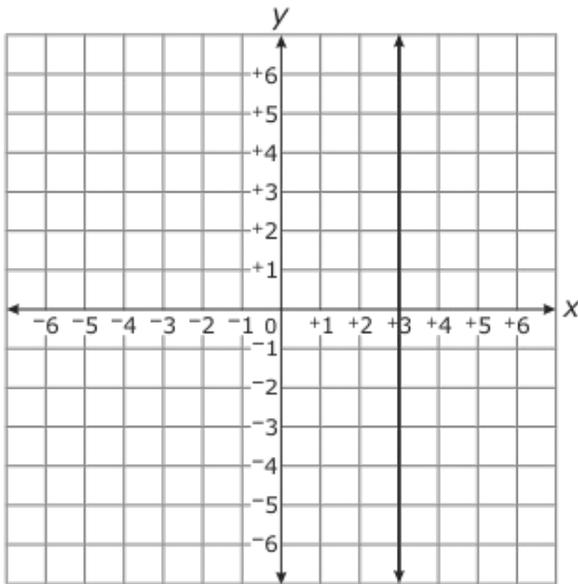
B.



C.



D.



157. Which function is non-linear?

- A. $y = x$
- B. $x = -5$
- C. $y = x^2$
- D. $x = y - 5$

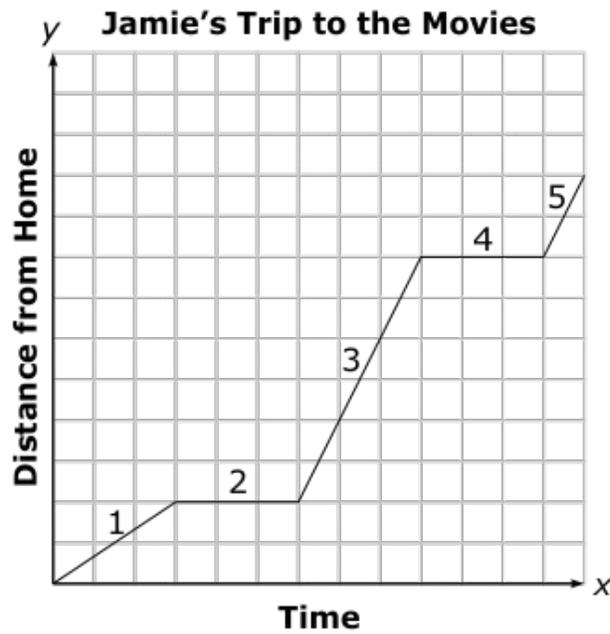
158. The equation of a function is $y = 4x + 3$. A second function contains the table of values below.

x	y
-1	1
1	5
3	9
5	13

Which is true about the two functions?

- A. One function is linear and one is non-linear.
- B. The slopes of both functions are the same.
- C. The y-intercepts of both functions are different.
- D. The y-intercepts of both functions are the same.

159. The graph below displays Jamie's trip to the movies.



Which scenario would **best** represent part 2 on the graph?

- A. Jamie is still at her home.
- B. Jamie is stopped at a stop light.
- C. Jamie is traveling at a constant rate on the highway.
- D. Jamie is traveling at a constant rate in a neighborhood.

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

- A. $y = 4^x$
- B. $y = x^3$
- C. $y = x^2$
- D. $y = x$

161. Which ordered pair would make the relation $\{(3, 5), (6, -2), (5, 4)\}$ a function?

- A. $(3, 4)$
- B. $(5, -2)$
- C. $(6, 1)$
- D. $(7, -2)$

162. Which set of data represents a linear function?

A.

x	3	3	3	3	3
y	4	-8	0	6	8

B.

x	2	4	6	8	10
y	3	6	9	12	15

C.

x	-3	-2	-1	0	1	2	3
y	6	4	2	0	2	4	6

D.

x	5	3	1	0	1	3	5
y	8	4	1	0	-1	-4	-8

163. In which equation is y **not** a function of x ?

- A. $y = \frac{2x+4}{3}$
- B. $y = 2x^2 - 7$
- C. $y = \sqrt{x}$
- D. $y = -3x$

164. Which table represents a function?

A.

x	y
-7	-9
-7	-11
-8	-13
-9	-15

B.

x	y
-1	-10
1	13
5	18
6	20

C.

x	y
-1	-50
0	-60
0	-70
1	-80

D.

x	y
-3	-8
-4	-9
-5	-10
-5	-11

165. Which statement is true about the relation $\{(-2, 3), (-1, 0), (0, -2), (1, 3), (2, 1)\}$?

- A. The relation forms a line.
- B. The relation forms a circle.
- C. The relation is a function.
- D. The relation is not a function.

166. The set of data in the table below represents a linear function.

x	y
-4	2
-2	2.5
0	3
2	3.5
4	4

Which is an equation for this function?

- A. $y = 4x + 3$
- B. $y = 2x + 3$
- C. $y = 0.5x + 3$
- D. $y = 0.25x + 3$

167. Caleb is a plumber.

- He charges a flat rate to come out to a customer's house, plus an hourly rate, h , to fix the problem.
- He charged \$265 for a job that took 3 hours.
- He charged \$445 for a job that took 6 hours.

Which equation does Caleb use to calculate the amount he charges, J , for a job?

- A. $J = 3h + 180$
- B. $J = 60h + 85$
- C. $J = 85h + 60$
- D. $J = 88h$

168. Which is an equation of the line that goes through the points $(-4, 7)$ and $(-4, 11)$?

- A. $x = -4$
- B. $y = -4$
- C. $y = -2x - 1$
- D. $y = -2x + 3$