

Unit 3 Review for SchoolNet Test

Student _____

Class _____

Date _____

1. The table below lists pairs of x - and y -coordinates that represent points on the graph of a linear equation.

x	y
3	10
5	5
7	0
?	?
11	-10

Which coordinates represent a point that is on the same line?

- A. $(-5, 9)$
 - B. $(8, 1)$
 - C. $(9, -5)$
 - D. $(10, -9)$
2. Which representation shows a rate that is less than 60 miles per hour?

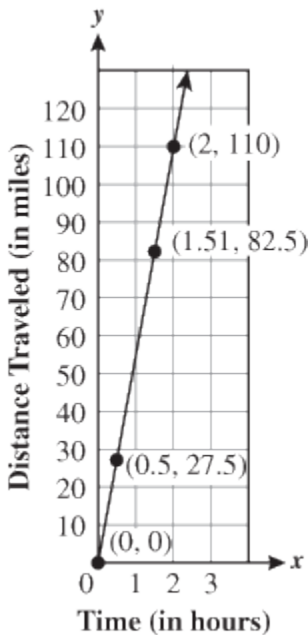
A.

Time (in hours)	Distance (in miles)
0.5	30
1.5	90

2.0	120
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B. $y = 70x$, where x represents time in hours and y represents distance in miles

C.



D. A line that passes through the origin and has a slope of 65

3. Limousine Company P and Company R both charge a rental fee plus an additional charge per hour.
- The equation $y = 50 + 30x$ models the total cost (in dollars), y , of renting a limousine from Company P for x hours.
 - The table below shows the cost to rent a limousine from Company R for different lengths of time.

Company R

Time (hours)	1	2	3	4	5
Total Cost	\$100	\$125	\$150	\$175	\$200

Which statement accurately compares the per hour charges of the two companies?

- A. Company P charges \$5 less per hour than Company R.
 - B. Company P charges \$5 more per hour than Company R.
 - C. Company P charges \$25 less per hour than Company R.
 - D. Company P charges \$25 more per hour than Company R.
4. Two functions are shown below.

Function 1: $y = x + 2$

Function 2:

x	y
-2	-6
0	-3
2	0

Which function has the greatest slope?

A. Function 1; slope = 1

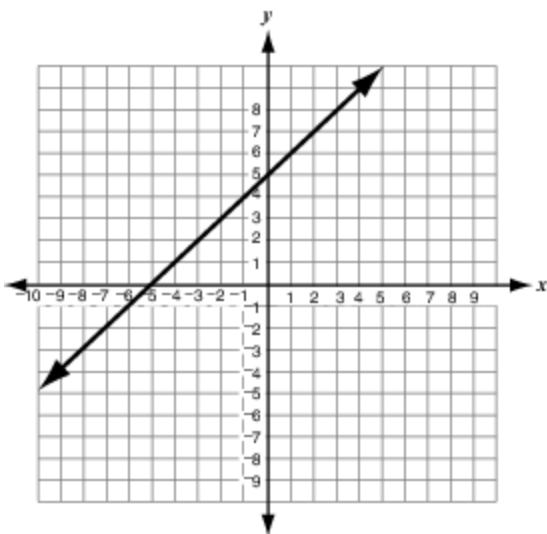
B. Function 1; slope = 2

C. Function 2; slope = 1.5

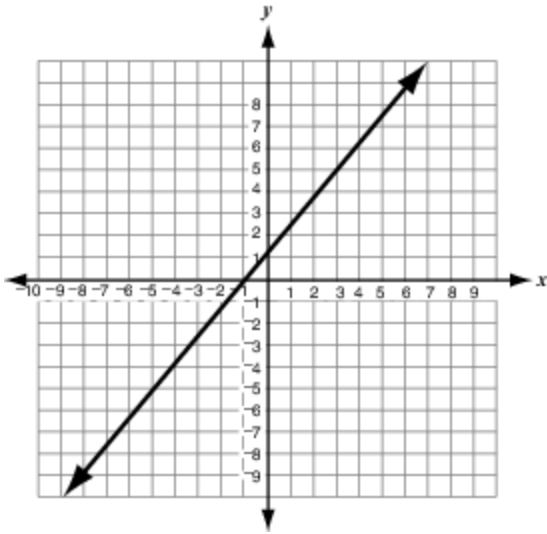
D. Function 2; slope = -3

5. Which graph represents a function with a greater rate of change than the equation $y = 2x - 3$?

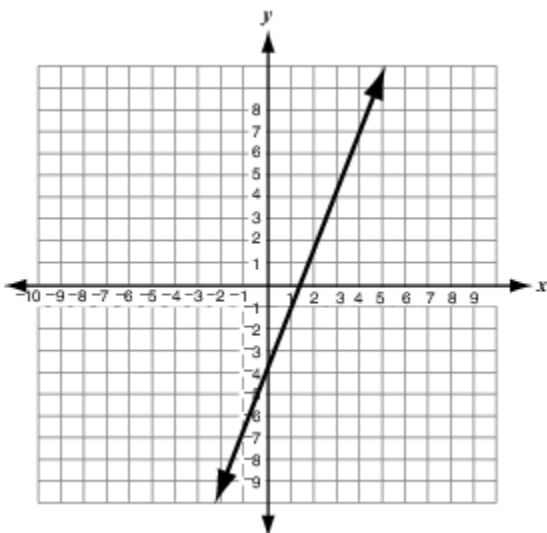
A.



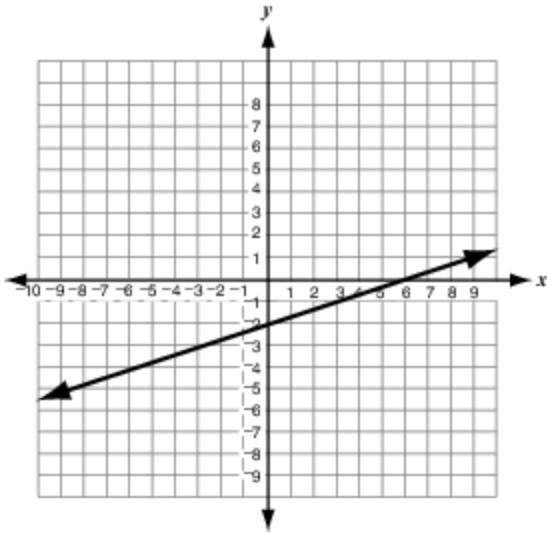
B.



C.



D.



6. Carla’s Catering uses the equation $y = 6.75x + 25$ to calculate the cost for delivering x boxed lunches to an event. The table below shows the total cost Dan’s Diner charges to deliver different numbers of boxed lunches to an event.

Number of Lunches (x)	Total Cost (y)
5	\$57.50
10	\$100.00
15	\$142.50

If a customer wants to place an order for 12 lunches, which company will provide the lowest total cost, and by how much?

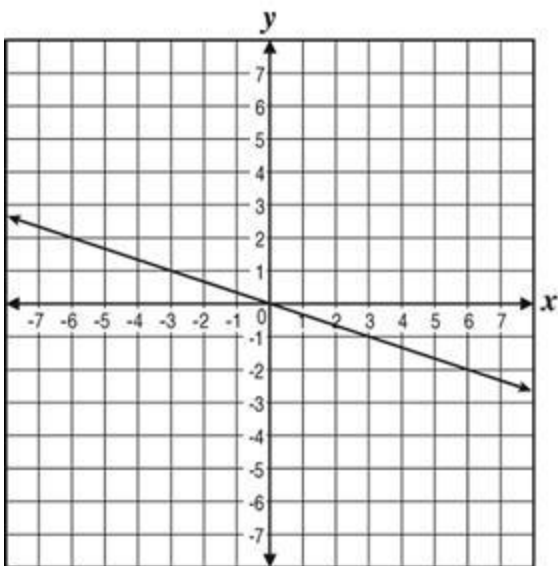
- A. Carla’s Catering is lower by \$11.00.
- B. Dan’s Diner is lower by \$11.00.

C. Carla's Catering is lower by \$21.00

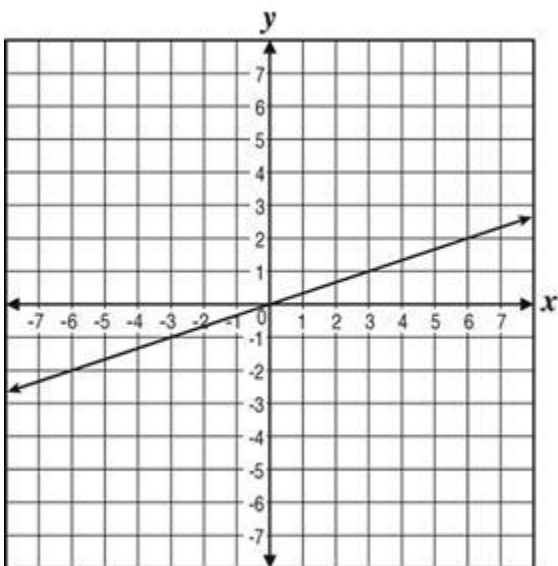
D. Dan's Diner is lower by \$21.00.

7. Which of the graphs below has a slope of $\frac{1}{3}$?

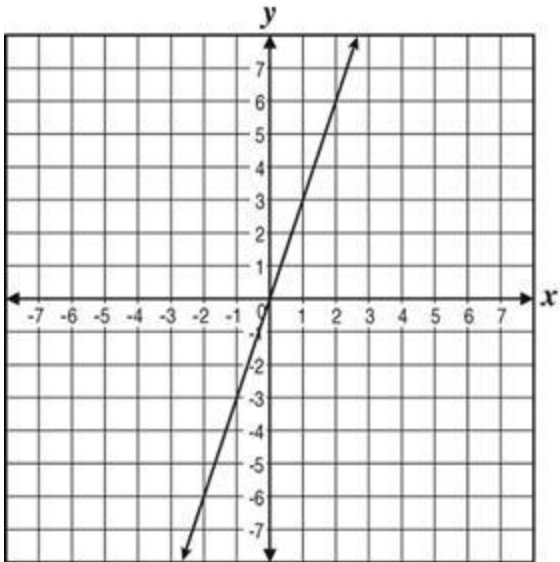
A.



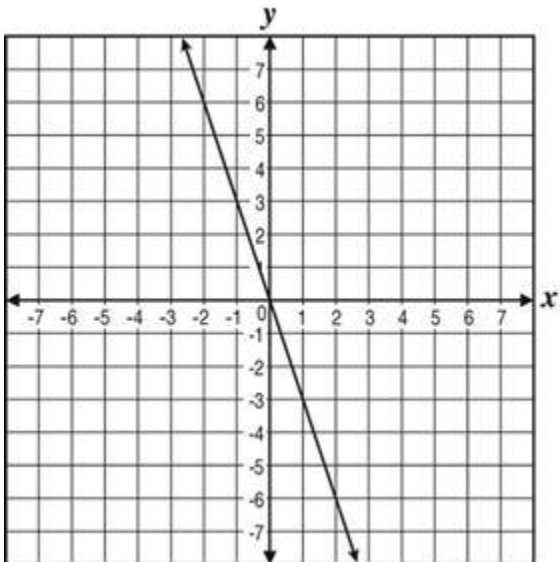
B.



C.



D.



8. A telephone calling card charges a connection fee, plus a charge per minute. A 10-minute call costs \$2.99. A 15-minute call costs \$3.99. What is the cost for a 30-minute phone call?

A. \$8.97

B. \$7.98

C. \$6.99

D. \$5.99

9. Mr. Smith earns \$75 a day plus \$35 for each car he sells. If e is the amount he earned and c is the number of cars he sold, which expression below shows how much Mr. Smith will earn in a day?

A. $e = 60c + 75$

B. $e = 35c + 75$

C. $e = 60c$

D. $e = 35c$

10. Line m passes through the point $(2, 3)$ and has a slope of $-\frac{2}{3}$. What is the equation of Line m in standard form?

A. $3x + 2y = 12$

B. $2x + 3y = 12$

C. $3x + 2y = 13$

D. $2x + 3y = 13$

11. Which is an equation of the line that passes through the point (2, 3) and has a slope of $\frac{1}{3}$?

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

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

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

D. $y = \frac{1}{3}x + \frac{7}{3}$

12. Which best describes the behavior of the graph $2x + y = 4$?

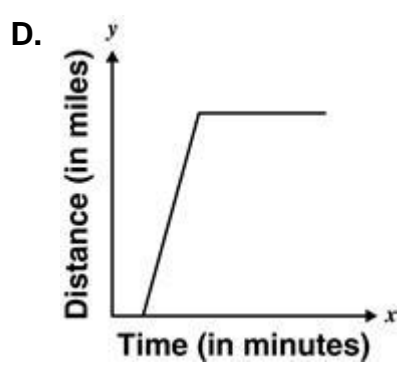
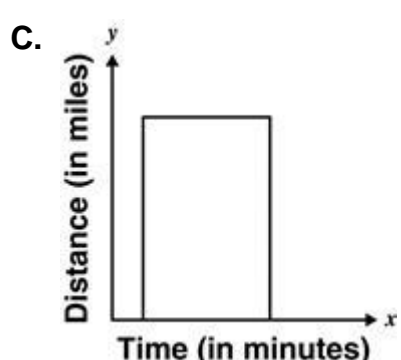
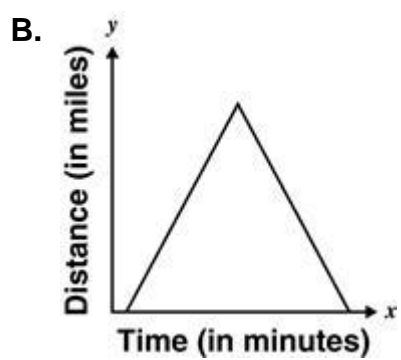
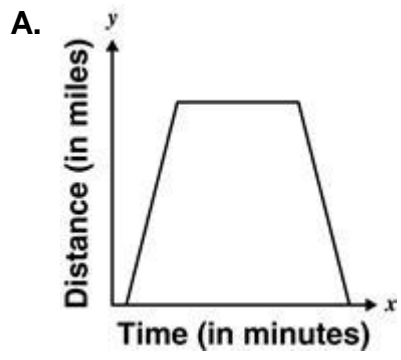
A. The graph is a vertical line.

B. The graph is a horizontal line.

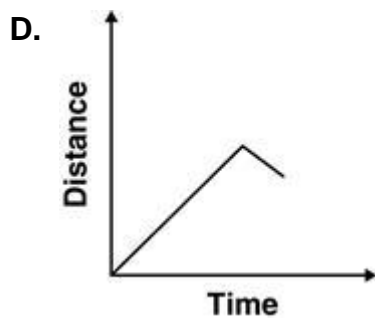
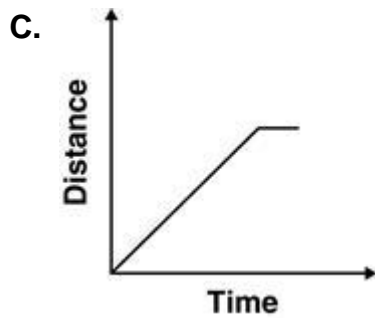
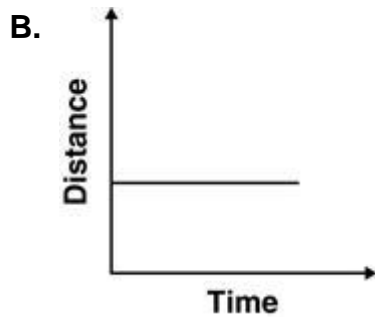
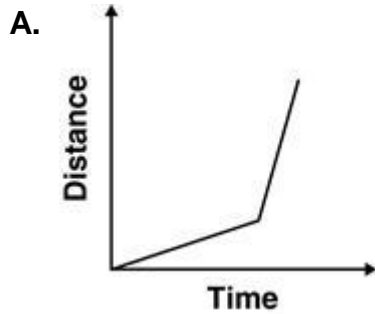
C. The graph is rising as x increases.

D. The graph is falling as x increases.

13. A school bus was stopped for 2 minutes at a red light. When the light turned green, the driver accelerated the bus at a steady rate and then continued driving at a constant speed. Next, the driver decreased the speed of the bus until it came to a full stop to pick up students. Which graph below best represents the speed of the bus over the time described?

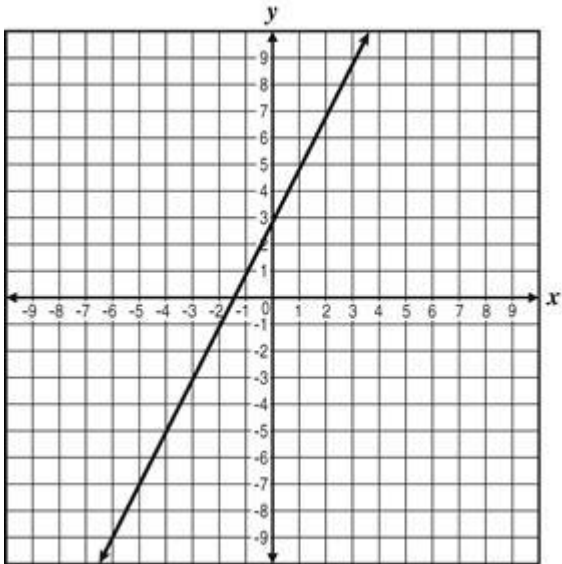


14. A toy car traveled at a constant speed for 40 seconds, and then increased to a slightly faster constant speed for 10 seconds. Which graph best illustrates the speed of the toy car?

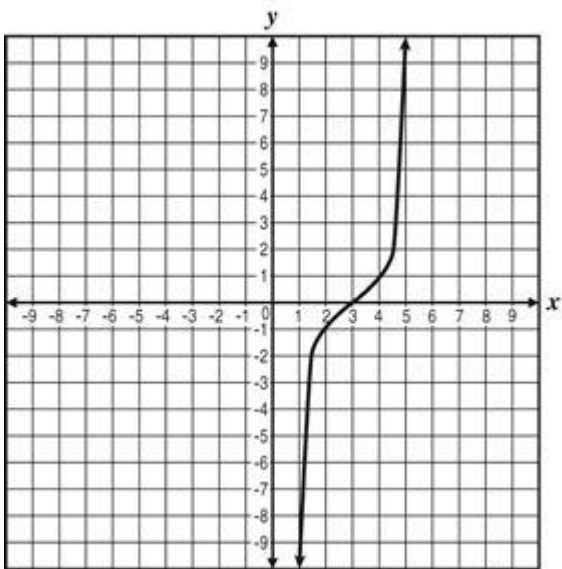


15. Which graph shows a nonlinear relationship?

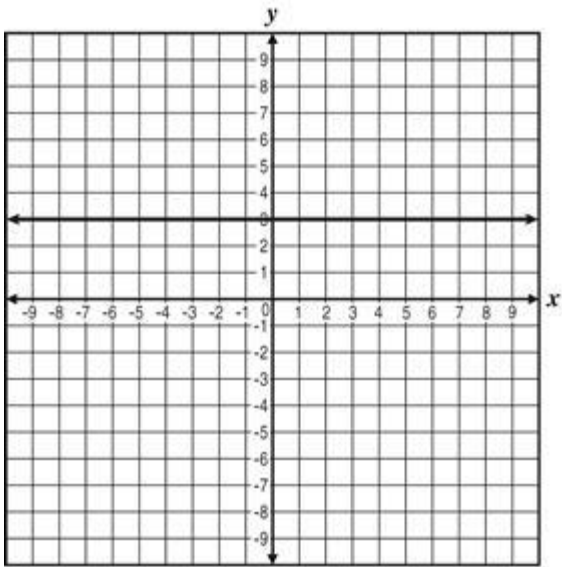
A.



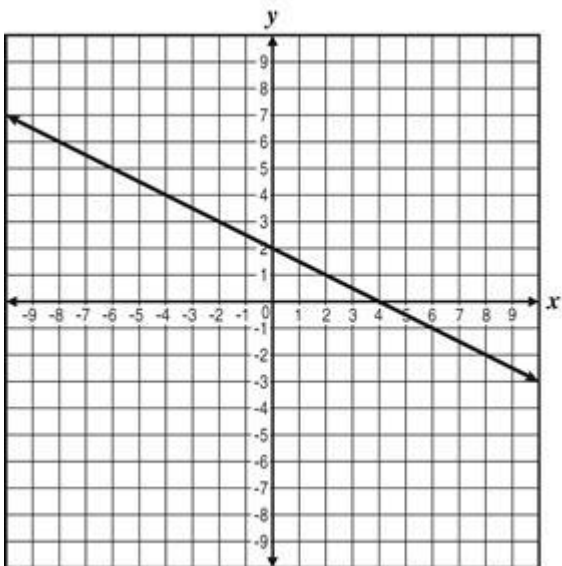
B.



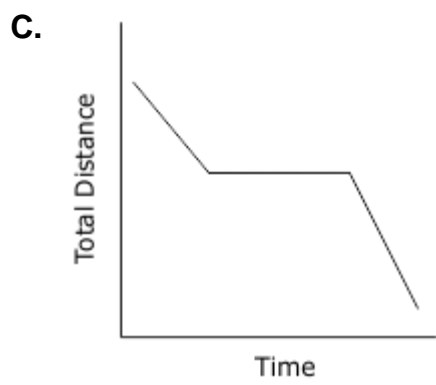
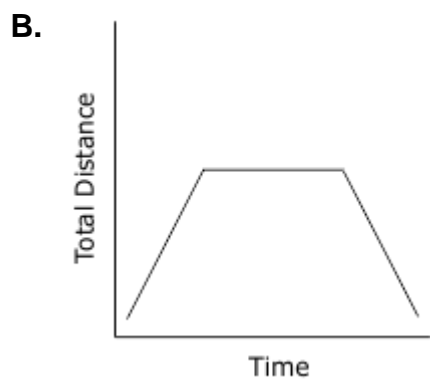
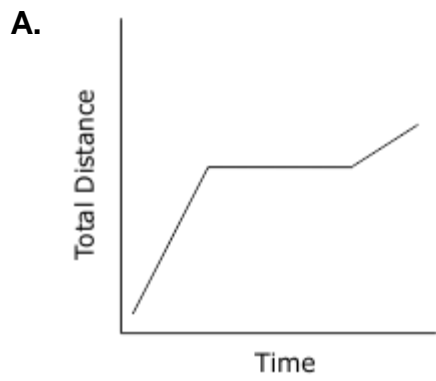
C.



D.



16. Larry started riding his bike at a rapid pace. He got tired and stopped to rest. When he started again, he was going at a slower rate. Which graph **best** shows Larry's trip?



D.



17. Which function has a greater rate of change than the function that passes through the points given in the table below?

x	y
4	2
6	3
8	4
10	5
12	6

A. $3x - 5y = 25$

B. $7y - 3x = 14$

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

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

18. Alice compared the graphs of two functions.

- The first function was $y = 3x + 4$.
- The second function fits the values in the table below.

x	y
2	17
5	32
8	47
11	62

What is the distance between the y -intercepts of the two functions?

- A. 1
- B. 2
- C. 3
- D. 4

19. In which function table do all of the points (x, y) lie on the line that has a slope of 3 and a y -intercept of 2?

A.

x	y
-1	-1
2	8
5	17
8	26

B.

x	y
-1	-1

2	7
5	17
8	26

C.

x	y
-1	-1
2	8
5	18
8	26

D.

x	y
-1	-1
2	8
5	17
8	25

20. Limousine Company P and Company R both charge a rental fee plus an additional charge per hour.
- The equation $y = 50 + 30x$ models the total cost (in dollars), y , of renting a limousine from Company P for x hours.
 - The table below shows the cost to rent a limousine from Company R for different lengths of time.

Company R

Time (hours)	1	2	3	4	5
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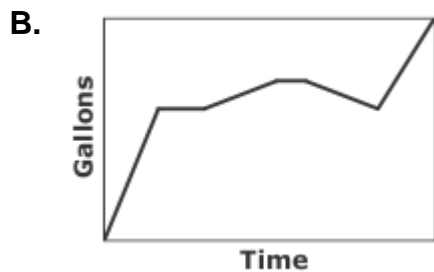
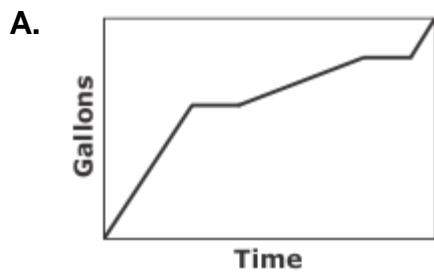
C. Company P charges \$25 less per hour than Company R.

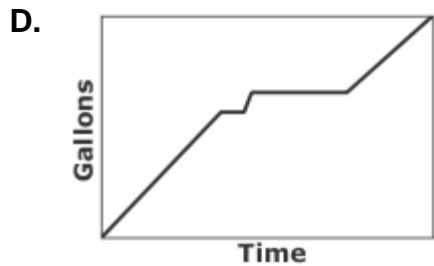
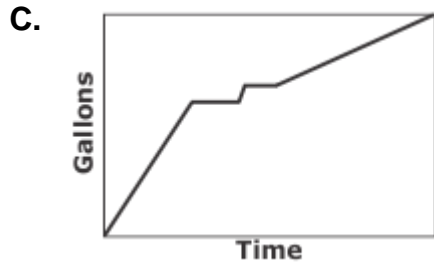
D. Company P charges \$25 more per hour than Company R.

21. Mr. Jones filled his swimming pool with water.

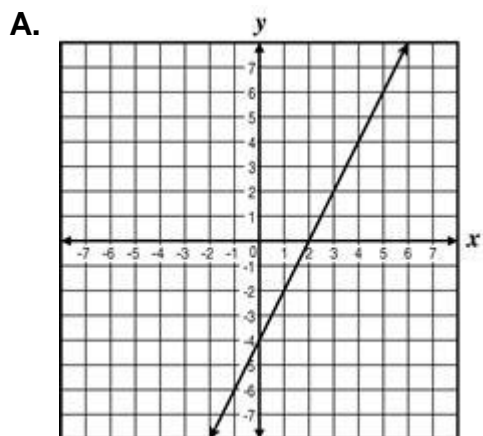
- Mr. Jones began filling the pool at a constant rate.
- He turned off the water for a while.
- He then turned the water back on at a slower constant rate.
- Mr. Jones turned off the water again for a while.
- He then turned the water back on at the first rate.

Which graph **best** represents Mr. Jones filling the pool?

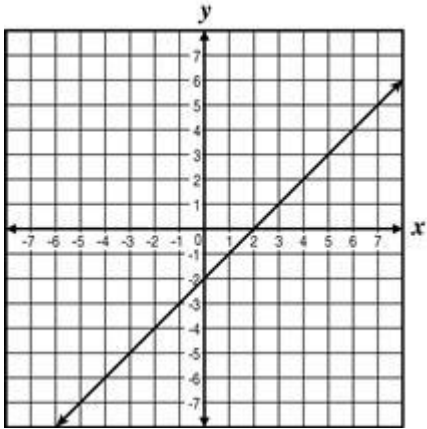




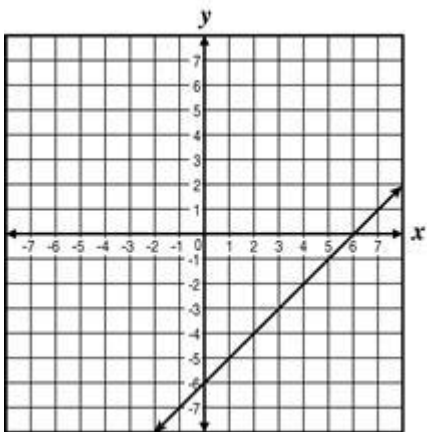
22. Which line appears to have the same slope as the equation $x - y = 4$ and has a y -intercept that is 2 units above the y -intercept of the given equation?



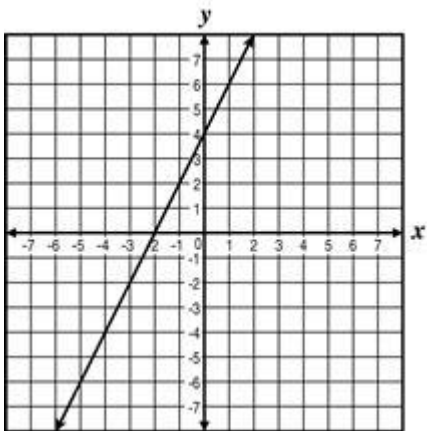
B.



C.



D.

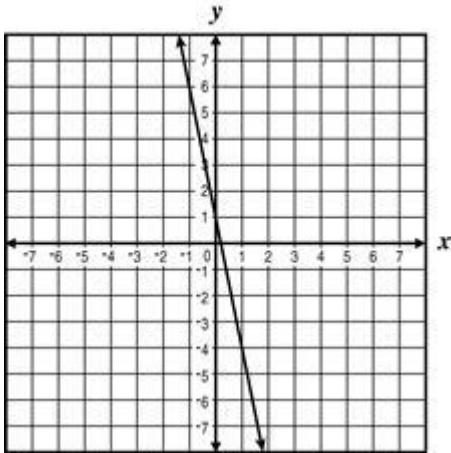


23. The table of values represents a linear function.

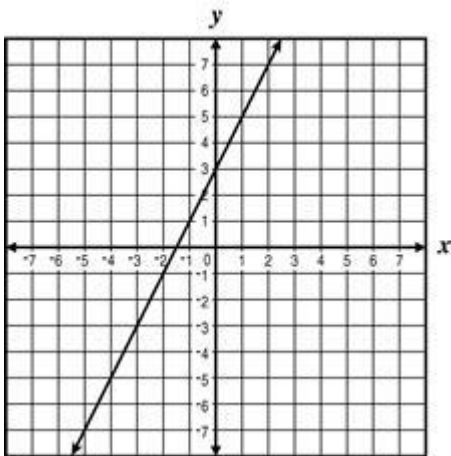
x	y
-1	-2
3	14

Which graph appears to have a line that is steeper than the line represented by the table of values?

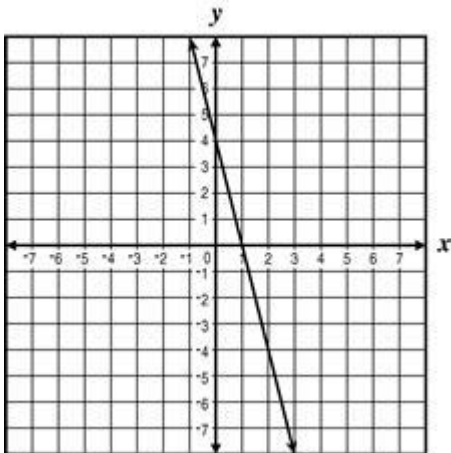
A.



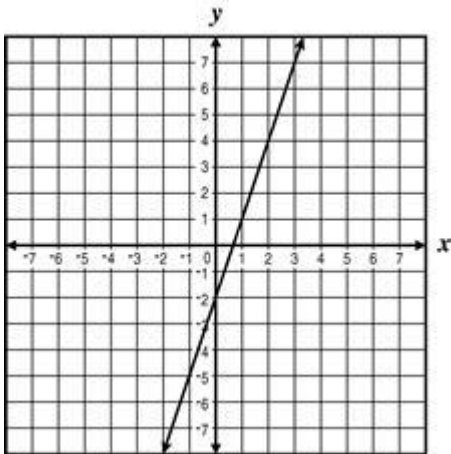
B.



C.



D.



24. Which table of ordered pairs represents a line that has a slope that is the same as the slope of the line represented by the equation $y = 2x + 1$?

A.

x	y
-2	7
3	-8

B.

x	y
-2	2
2	4

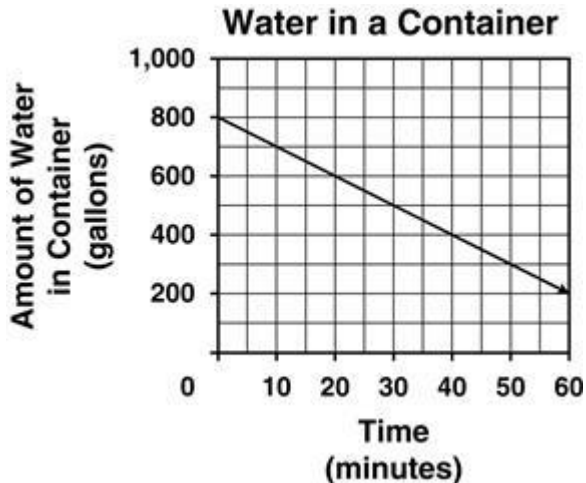
C.

x	y
-1	-7
4	3

D.

x	y
-2	2
4	-1

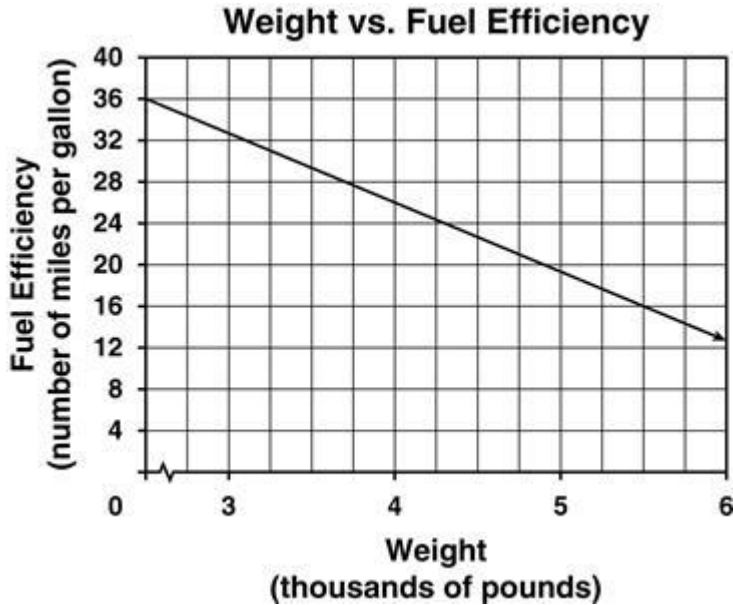
25. The graph models the amount of water in a container that is being pumped out at a constant rate.



Which statement is true based on the graph?

- A. There are 200 gallons of water in the container at the start, and the water is being pumped from the container at a rate of 30 gallons per minute.
- B. There are 200 gallons of water in the container at the start, and the water is being pumped from the container at a rate of 100 gallons per minute.
- C. There are 800 gallons of water in the container at the start, and the water is being pumped from the container at a rate of one gallon every 6 minutes.
- D. There are 800 gallons of water in the container at the start, and the water is being pumped from the container at a rate of 100 gallons every 10 minutes.

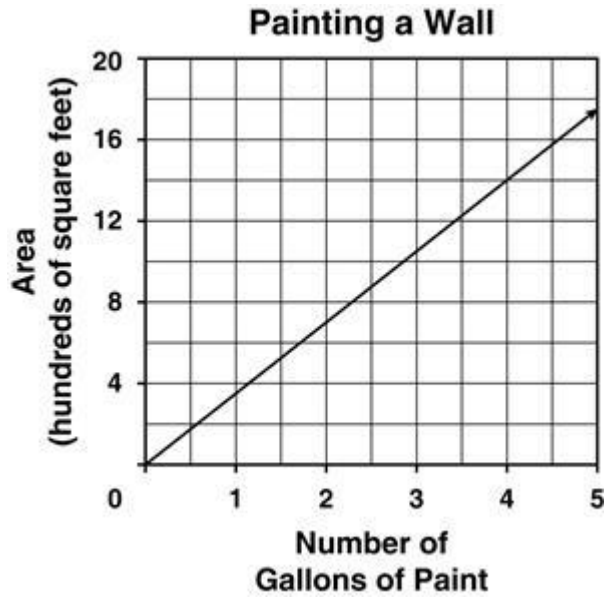
26. The graph models the relationship between the weight of a vehicle and the fuel efficiency it gets.



Based on the graph, which statement is true?

- A. An additional pound added to the weight of the vehicle will increase the fuel efficiency by about 6 miles per gallon.
- B. An additional pound added to the weight of the vehicle will decrease the fuel efficiency by about 6 miles per gallon.
- C. An additional 150 pounds added to the weight of the vehicle will increase the fuel efficiency by about 1 mile per gallon.
- D. An additional 150 pounds added to the weight of the vehicle will decrease the fuel efficiency by about 1 mile per gallon.

27. The graph models the area of a wall, in hundreds of square feet, that can be covered with paint for the number of gallons of paint.



Based on the graph, which statement is true?

- A. An additional 3 gallons of paint will cover an additional 350 square feet.
- B. An additional 5 gallons of paint will cover an additional 1,750 square feet.
- C. An additional 2.5 gallons of paint will cover an additional 280 square feet.
- D. An additional 0.5 gallon of paint will cover an additional 700 square feet.