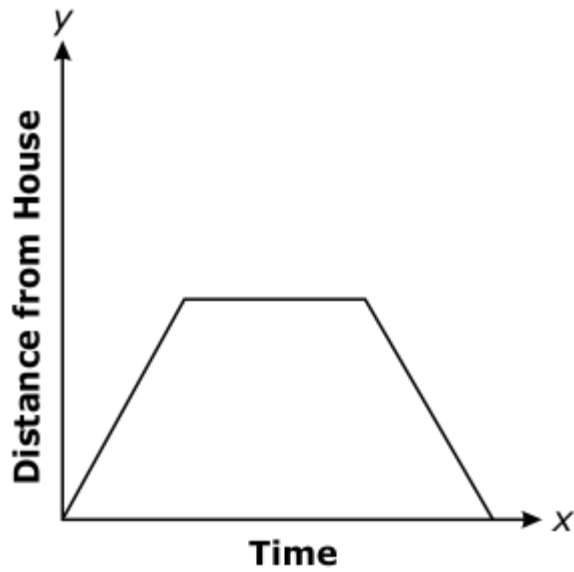


Math Unit 10 Scatter Plots Dugger Review

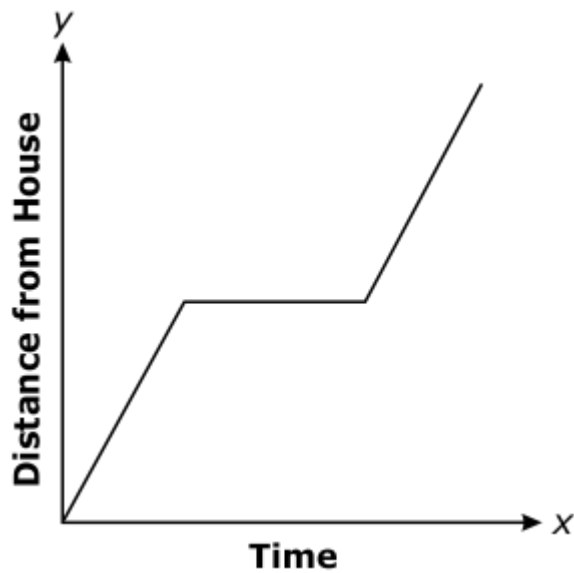
1. What is the **approximate** difference between $\sqrt{120}$ and $\sqrt{80}$?
2. In which choice do all the points lie on the same line?
 - A. (0, -2), (1, -1), (2, 2), (3, 7)
 - B. (0, 0), (1, 2), (2, 4), (3, 6)
 - C. (0, 0), (1, 1), (2, 8), (3, 27)
 - D. (0, 0), (1, 1), (2, 4), (3, 9)
3. The area of the surface of the Atlantic Ocean is approximately 31,830,000 square miles. How is this area written in scientific notation?
4. Which data would **most likely** show a negative correlation when graphed on a scatterplot?
 - A. Age of vehicle and value of vehicle
 - B. favorite color and favorite food
 - C. Address of home and eye color
 - D. miles traveled and time spent driving
5. In which set of points do all of the points (x, y) lie on the line that has a slope of 3 and a y -intercept of 2?
 - A. (-1, -1), (2, 8), (5, 17), (8, 26)
 - B. (-1, 1), (2, 7), (5, 17), (8, 26)
 - C. (-1, -1), (2, 8), (5, 18), (8, 26)
 - D. (-1, 1), (2, 8), (5, 17), (8, 25)

6. Emily went to the beach for the day. Leaving her house, Emily drove to the beach, stayed there for a few hours, then drove home. Which graph **best** represents this scenario?

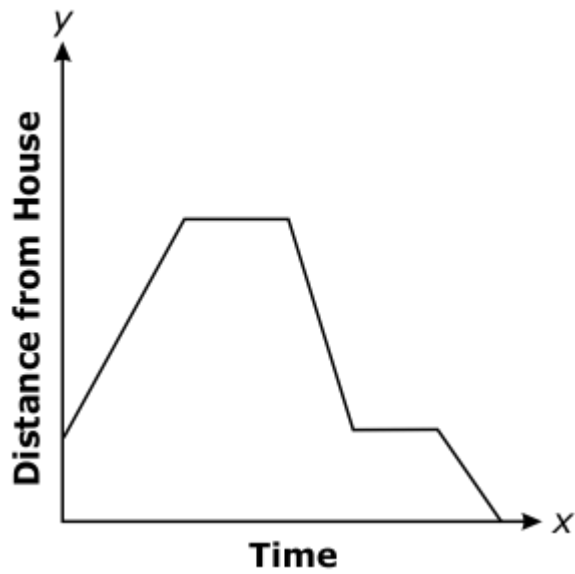
A.



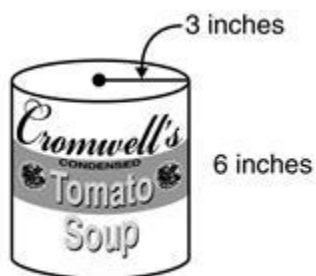
B.



C.



7. What is the volume of the soup can shown below has a radius of 3 inches and a height of 6 inches.



Note: Figure not drawn to scale

8. Bob's Carpet Cleaning Company uses the equation $y = 22x + 30$ to calculate cost, y , to clean x number of rooms. Andy's Carpet Cleaning Company uses the table below to calculate the cost to clean rooms.

Andy's Carpet Cleaning Company

Number of Rooms (x)	Total Cost (y)
2	\$75
4	\$115
7	\$175

Laura needs 5 rooms cleaned. Which company charges less and by how much less?

- A. Bob's Carpet Cleaning charges \$5.00 less than Andy's Carpet Cleaning.
- B. Andy's Carpet Cleaning charges \$5.00 less than Bob's Carpet Cleaning.
- C. Bob's Carpet Cleaning charges \$1.00 less than Andy's Carpet Cleaning.
9. A plant grew $1.\overline{3}$ inches within the first month and $0.\overline{5}$ of an inch within the next month. How many total inches did the plant grow in the first two months?

10.

What is the value of the expression $\frac{2^{-6}}{2^4} \times 2^8$?

11. Which equation represents the relationship between x and y in the table?

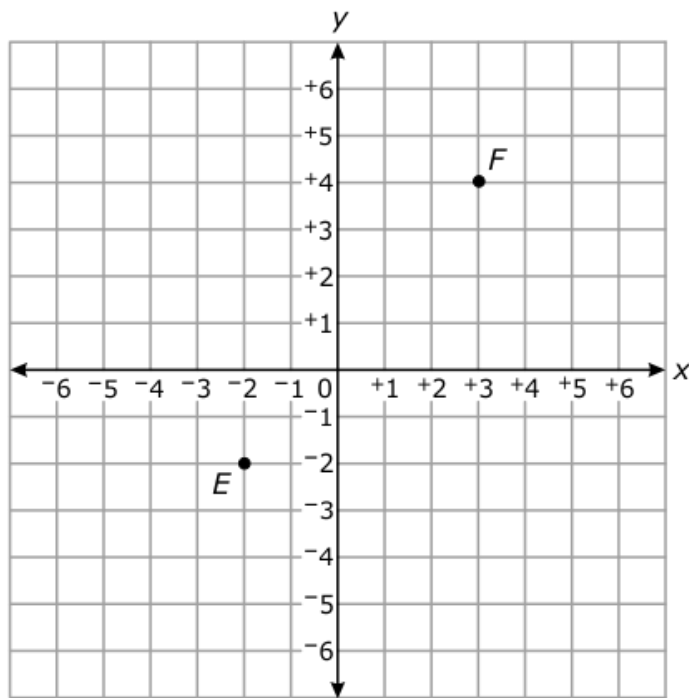
x	y
0	0
5	1
10	2
15	3
20	4

- A. $y = x$
- B. $y = x - 4$
- C. $y = x - 8$
- D. $y = \frac{x}{5}$

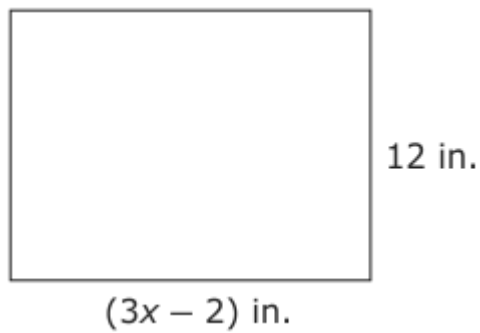
12. When graphed on a scatterplot, which set of data would **most likely** show a positive correlation?

- A. shoe size and weight of a person
- B. amount of income earned and years of education
- C. cost to heat a house and outside temperature
- D. day of the week and temperature

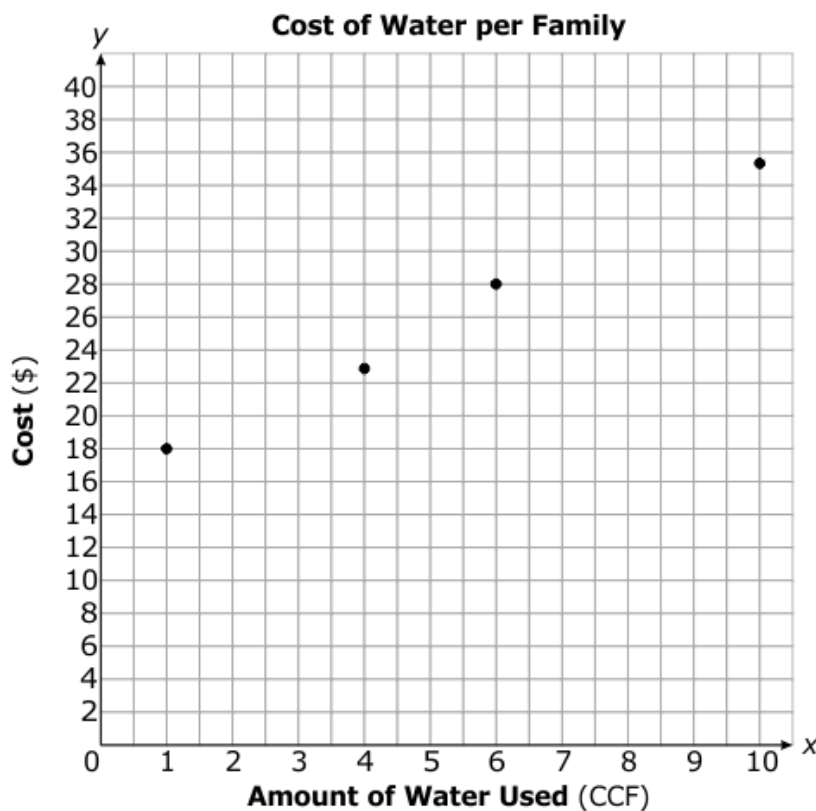
13. What is the *approximate* distance between points E and F on the graph below?



14. The perimeter of the rectangle below is 92 inches. What is the value of x ?



15. Suppose that a scientist estimates that every square mile of the ocean contains an average of 4.6×10^4 pieces of trash. The area of the Earth's surface that is covered by oceans is approximately 1.2×10^8 square miles. Using the estimate, how many pieces of trash are in the Earth's oceans?
16. The scatterplot below shows what a city charges for water based on the amount of water used (CCF).



Using a linear model, which equation **best** fits the data?

- A. $y = x + 2$
- B. $y = 2x + 15$
- C. $y = 2x + 2$
- D. $y = x + 15$

17. Students were surveyed about book bags. The results are shown below.

	Male	Female
Carry a Book Bag	47	57
Do Not Carry a Book Bag	63	48

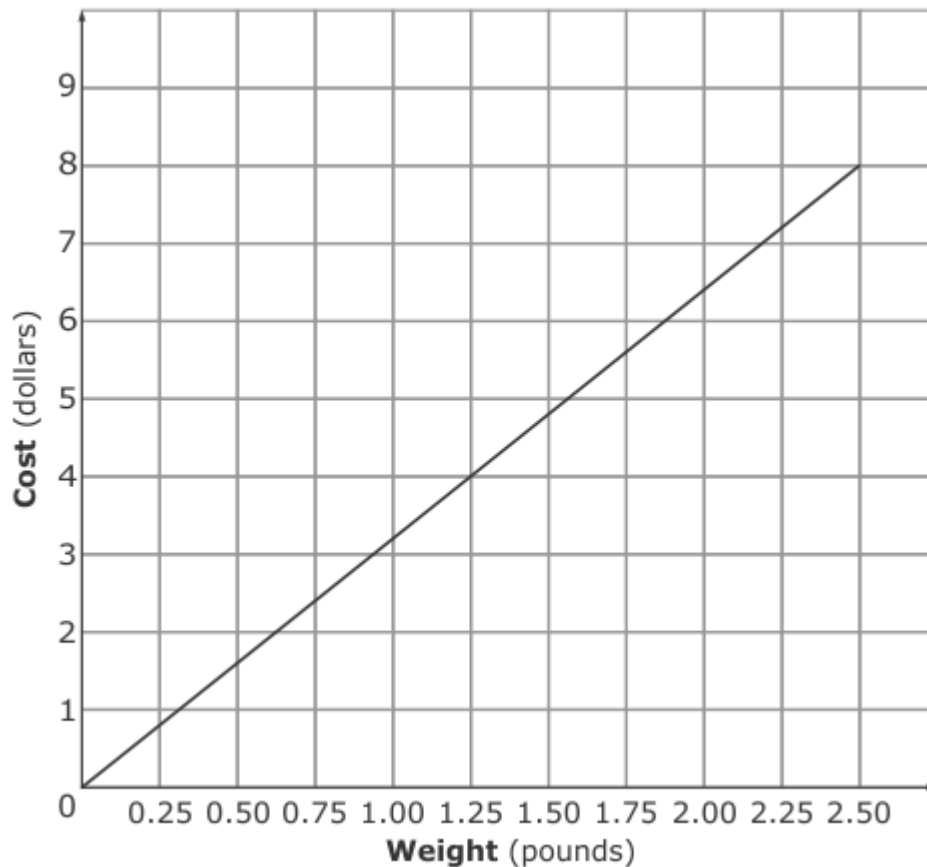
A student concluded that, for those in the survey, females are more likely to carry a book bag than males. Which explanation

best supports the student's conclusion?

- A. For females, 54% carry a book bag, while for males, 43% carry a book bag.
- B. For females, 27% carry a book bag, while for males, 22% carry a book bag.
- C. For females, 57 carry a book bag, while for males, 47 carry a book bag.
- D. For females, 48 do not carry a book bag, while for males, 63 do not.

18. Two stores sell cherries at different prices per pound.

- Store P sells 3.5 pounds of cherries for \$13.30.
- The graph below shows the cost to purchase different weights of cherries at Store Q.



Phillip needs to purchase 10 pounds of cherries. Which statement below is true?

- A. Phillip will spend \$8.00 less on cherries at Store P than at Store Q.
- B. Phillip will spend \$8.00 more on cherries at Store P than at Store Q.
- C. Phillip will spend \$6.00 less on cherries at Store P than at Store Q.
- D. Phillip will spend \$6.00 more on cherries at Store P than at Store Q.

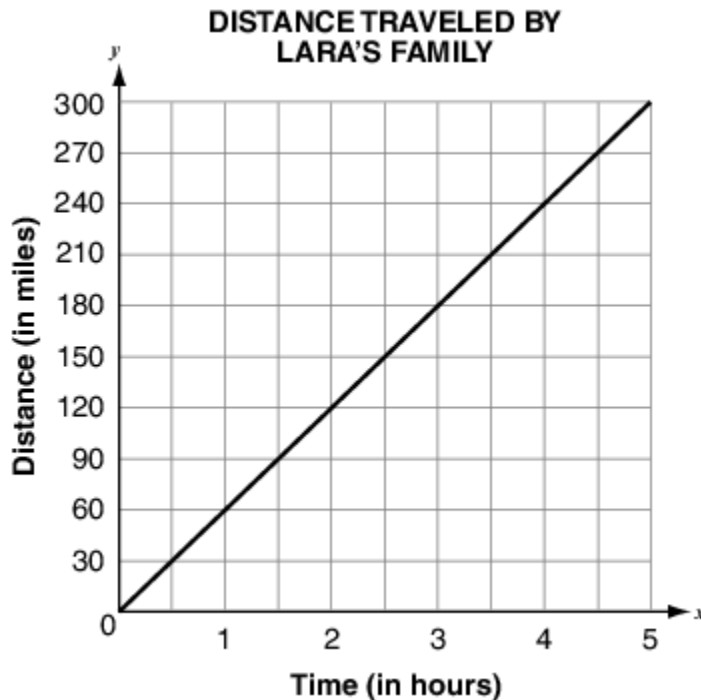
19. The table shows the air temperatures at different elevations.

Elevation (feet)	Temperature (°F)
0	75°
100	70°
200	67°
300	64°
400	59°
500	55°
600	50°

Which line best fits this set of data?

- A. $y = -\frac{1}{25}x + 75$
- B. $y = \frac{1}{25}x - 75$
- C. $y = \frac{1}{25}x + 75$
- D. $y = -\frac{1}{25}x - 75$

20. Zoe and Lara are both traveling to an out-of-town soccer tournament with their parents. The distance traveled by Zoe and her family during their trip can be modeled by the equation $D = 65x$ where x represents the number of hours traveled and D represents the distance traveled in miles. The graph below models the distance, y , traveled by Lara's family after x hours.



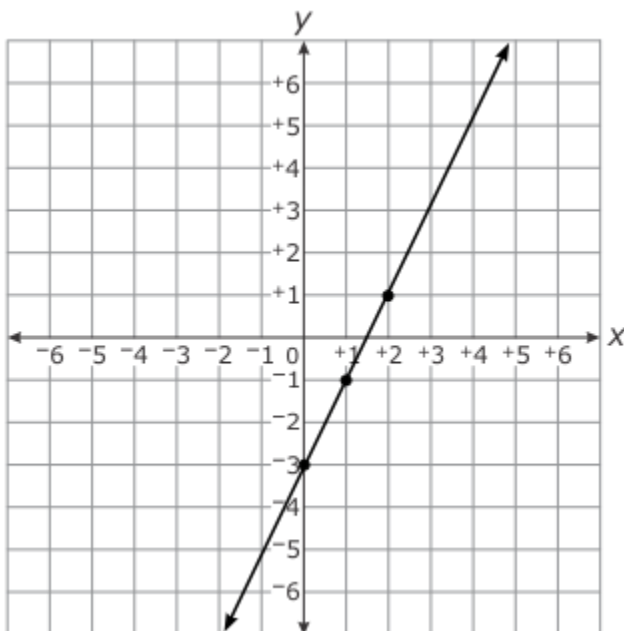
Which statement correctly compares the speeds at which Zoe's and Lara's families traveled?

- A. Zoe's family traveled at a speed 5 mph faster than Lara's family.
- B. Zoe's family traveled at a speed 35 mph faster than Lara's family.
- C. Zoe's family traveled at a speed 5 times as fast as Lara's family.
- D. Zoe's family traveled at a speed about 2 times as fast as Lara's family.

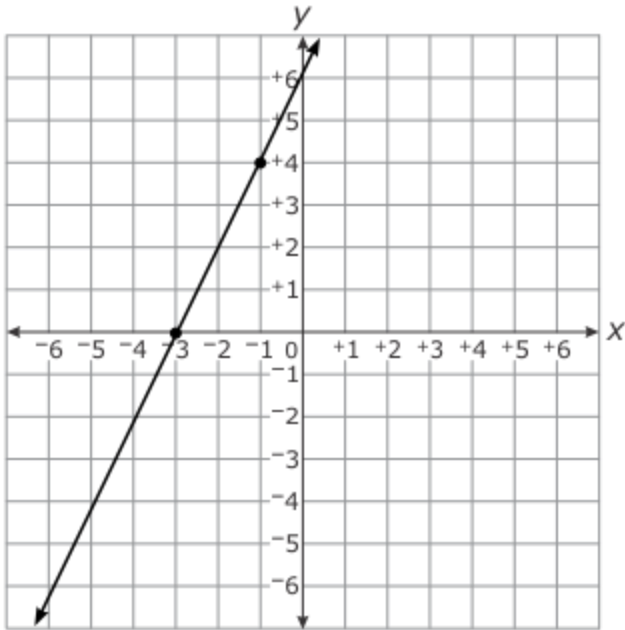
21. The vertices of a triangle are located at $(0, 4)$, $(-2, 0)$, and $(1, 0)$. The triangle will be dilated by a scale factor of 0.5. What will be the coordinates of the vertices of the image triangle?

22. Which is the graph of the equation $y = 2x - 3$?

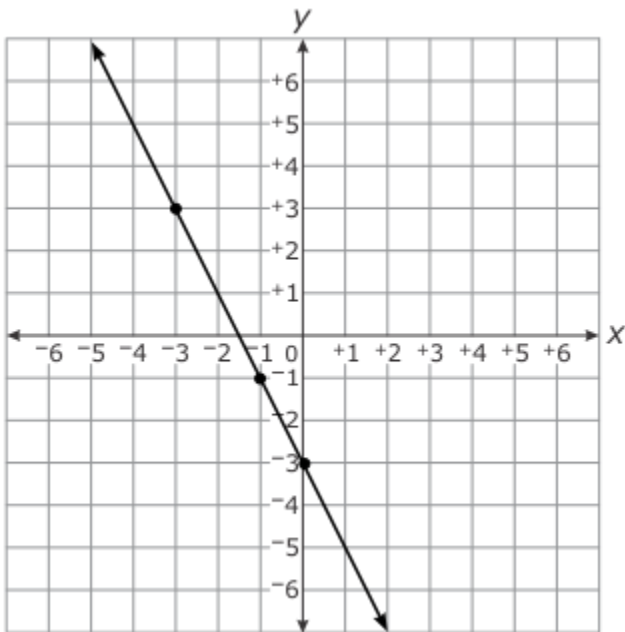
A.



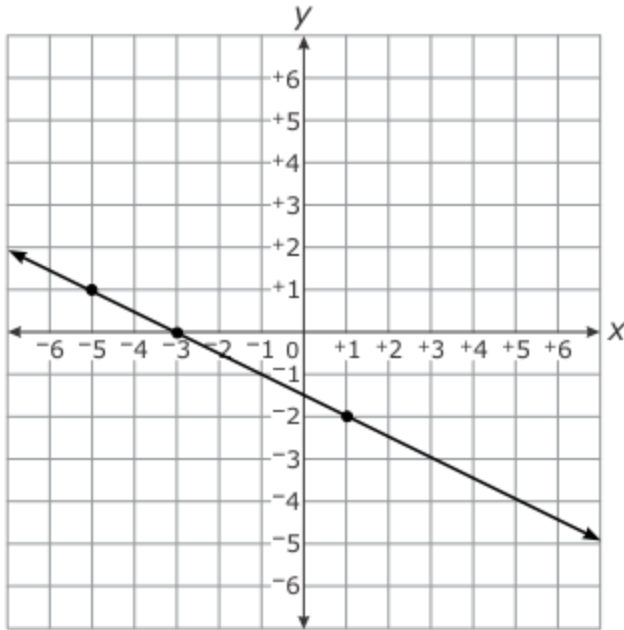
B.



C.

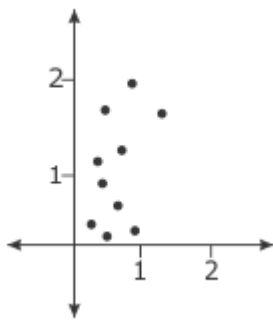


D.

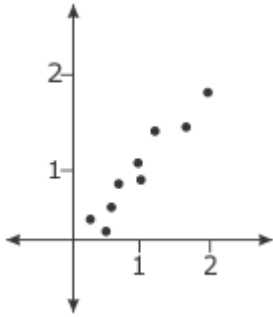


23. James is fitting the linear equation $y = \frac{1}{2}x$ to a data set. Which scatterplot shows the data set that the linear equation would fit *best*?

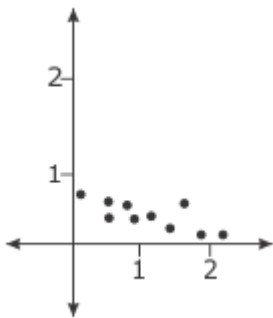
A.



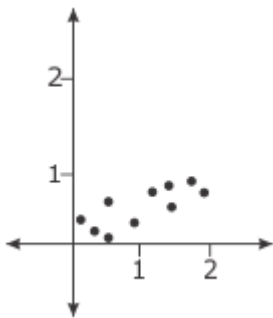
B.



C.



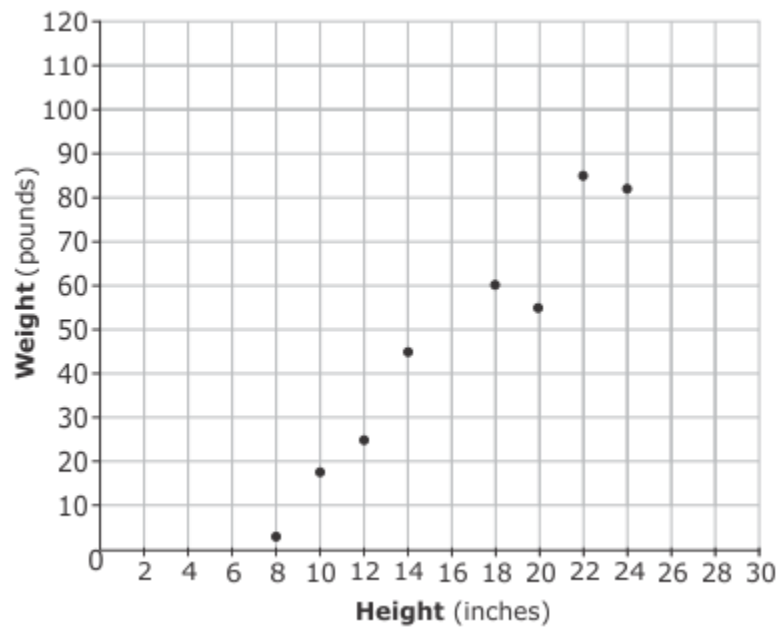
D.



24. Three times the difference of a number x and seven is twenty-three minus the sum of three times a number x and two. What is the value of x ?

25. Point W is located at $(7, 3)$ on a coordinate plane. Point W is translated 2 units to the left and 3 units up. What are the coordinates of the image point W' ?

26. Sharon made a scatterplot comparing the shoulder heights of dogs to their weights.



Sharon's dog has a shoulder height of 28 inches. Using a linear model, predict her dog's weight? (round to the nearest 5 pounds)

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

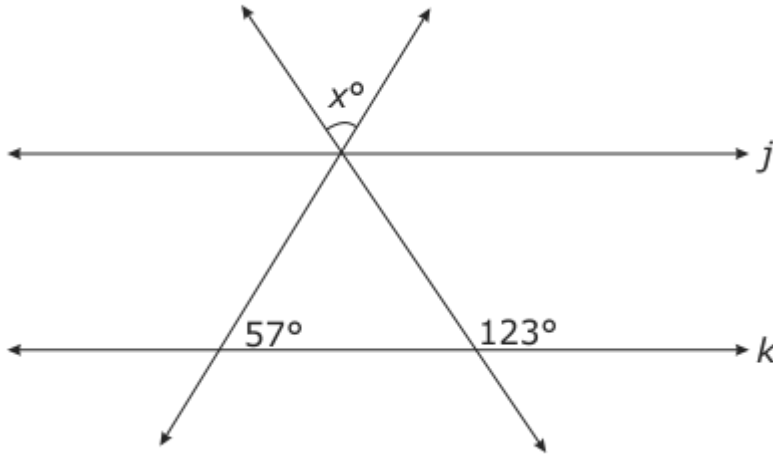
x	y
4	2
6	3
8	4
10	5
12	6

- A. $3x - 5y = 25$
- B. $7y - 3x = 14$
- C. $y = 1 + \frac{1}{2}x$
- D. $y = -1 + \frac{1}{4}x$

28. Which is a function?

- A. $\{(3, 8), (4, 1), (5, 3), (6, 1)\}$
- B. $\{(2, 4), (-3, 5), (2, 7), (5, 9)\}$
- C. $\{(-1, 6), (0, 3), (1, 5), (0, -2)\}$
- D. $\{(4, 1), (3, -2), (1, -2), (4, 5)\}$

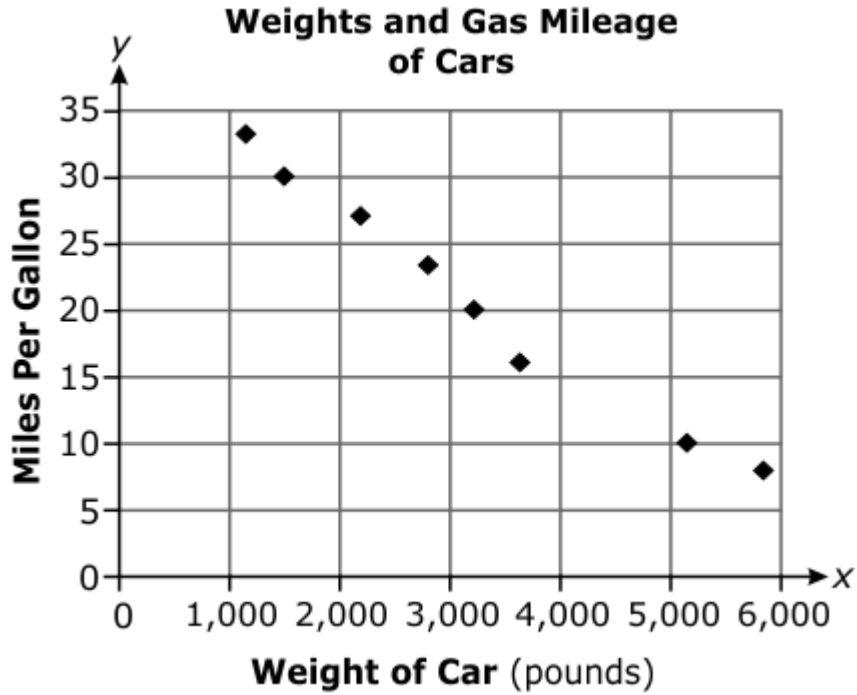
29. In the figure below, lines j and k are parallel.



What is the measure of $\angle x$?

- A. 24°
- B. 66°
- C. 75°
- D. 123°

30. The scatterplot below shows the effect the weight of a car has on its gas mileage.



Using a linear model, *about* how many miles per gallon will a car get that weighs 4,500 pounds?

31. What is the area of the triangle shown below?

