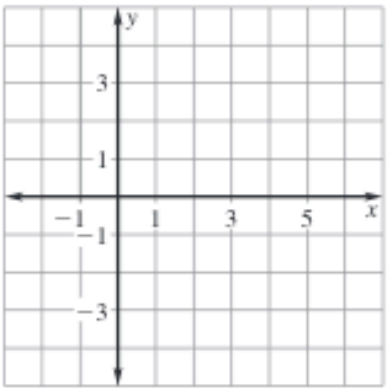
Algebra I
Review Chapter 3

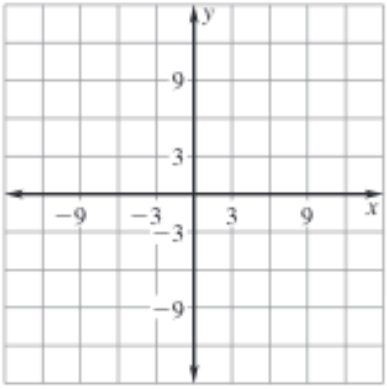
Name _____

1. Plot the points $P(-2, -3)$, $Q(1, 0)$, $R(3, 0)$, and $S(5, -3)$ in the coordinate plane. Connect the points in order. Identify the resulting figure. Find its area.

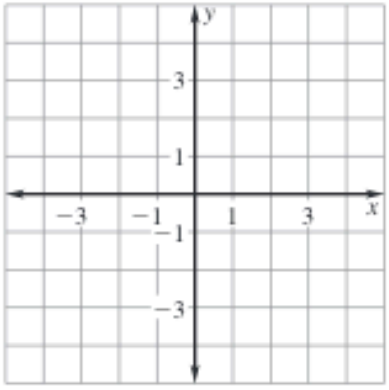


Graph the function with the given domain. Then identify the range of the function.

2. $y = 4x + 3$; domain $-2 \le x \le 2$



3. $y = -2x - 1$; domain $x \le 0$



Find the *x*-intercept and the *y*-intercept of the graph of the equation.

4. $3x - 2y = 8$ **5.** $y = -0.4x + 1$ **6.** $y = -\frac{3}{4}x + 3$

Find the slope of the line that passes through the points.

7. $(-4, -3)$ and $(-1, 1)$

8. $(-1, -3)$ and $(4, -3)$

9. $(-2, 3)$ and $(1, -3)$

Answers

1. _____

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_____

2. _____

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3. _____

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4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

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11. _____

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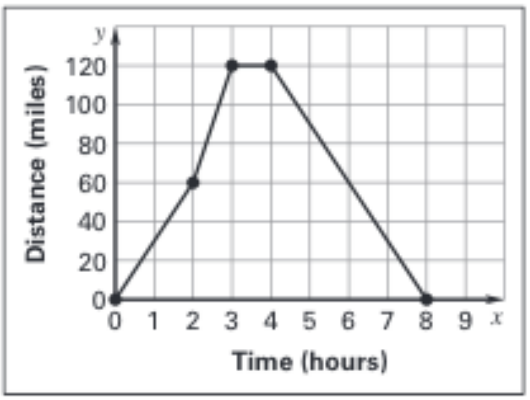
In Exercises 10 and 11, use the following information.

The graph shows the distance of a car traveling along a straight road for 8 hours.



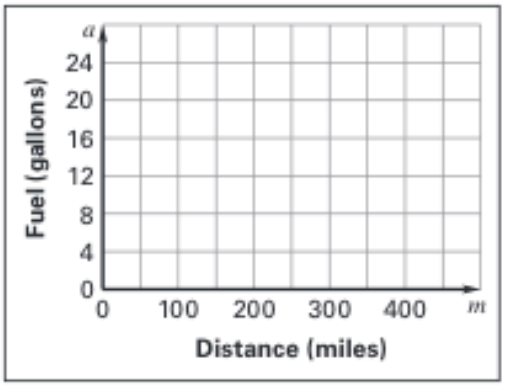
10. Give a verbal description of the trip.

11. What do the intercepts represent in this situation?

In Exercises 12 and 13, use the following information.

Your family and a friend's family are going on vacation. The amount of fuel remaining in your family's car after driving m miles is given by the equation $a = -0.03m + 12$ because it has a 12-gallon fuel tank and uses 0.03 gallon of fuel per mile driven. The amount of fuel remaining in your friend's van is given by the equation $a = -0.08m + 22$.

12. Graph both equations in the coordinate plane.



13. Use the graphs to find the difference of the amount of fuel remaining in the two fuel tanks after driving 100 miles.

Given that *y* varies directly with *x*, write a direct variation equation that relates *x* and *y*.

14. $x = -8, y = 5$ **15.** $x = \frac{1}{3}, y = 2$ **16.** $x = -3, y = -4.5$

Answers

12. _____

13. _____

14. _____

15. _____

16. _____

17. _____

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18. _____

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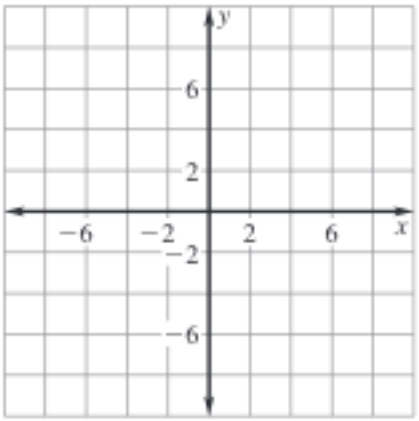
Graph the function. Compare the graph to the graph of $f(x) = x$.

17. $g(x) = x - 5$



18. $h(x) = -\frac{1}{2}x$