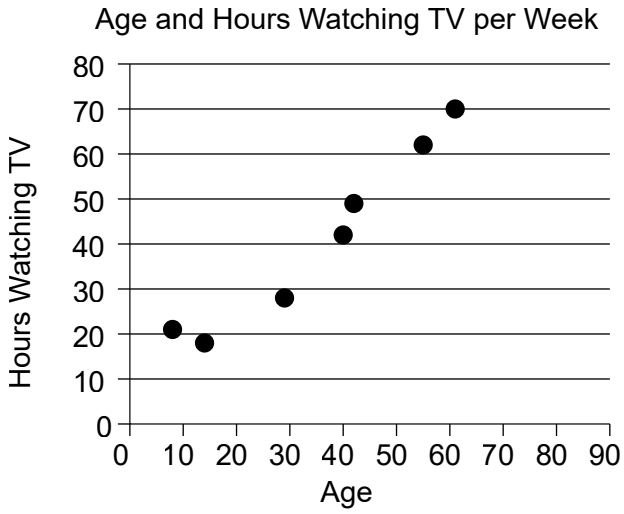
Solution

Begin by creating a scatter plot of the data to determine if there is a correlation between age and the number of hours a person watches TV per week.



Notice that there is an upward trend in the data. Therefore, the correlation in words is positive.

11.R.3 Exercises

Concept Check

True/False. Determine whether each statement is true or false. If a statement is false, explain how it can be changed so the statement will be true. (**Note:** There may be more than one acceptable change.)

1. The y-intercept is the point where a line crosses the y-axis.

2. The terms ordered pair and point are used interchangeably.

3. A horizontal line does not have a y-intercept.

4. All x-intercepts correspond to an ordered pair of the form .

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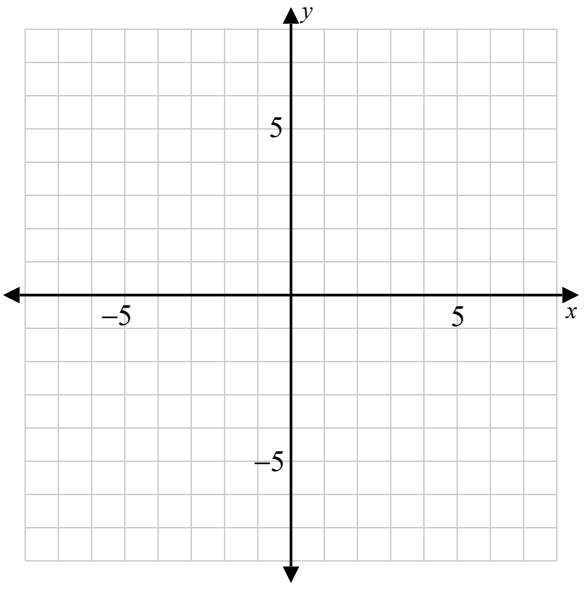
Practice

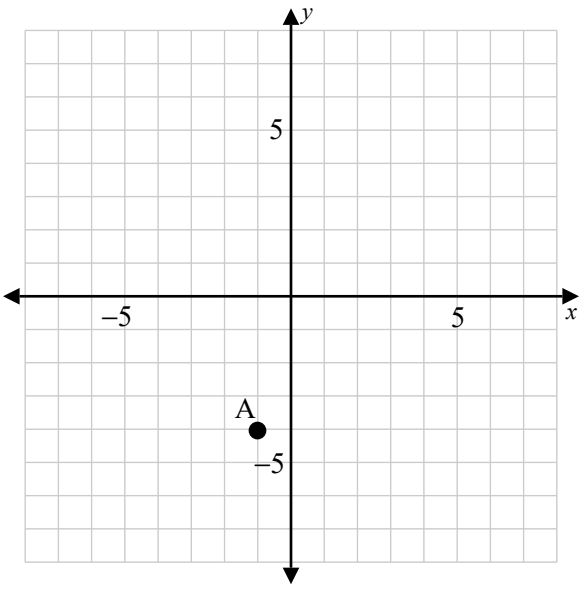
5. Consider the following.

A (2, −1)

a. Plot the given point on the graph.



b. Identify the coordinates of the point A on the graph.



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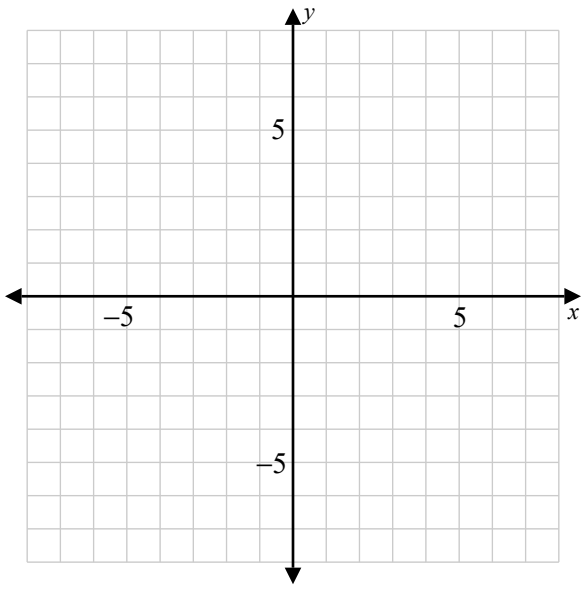
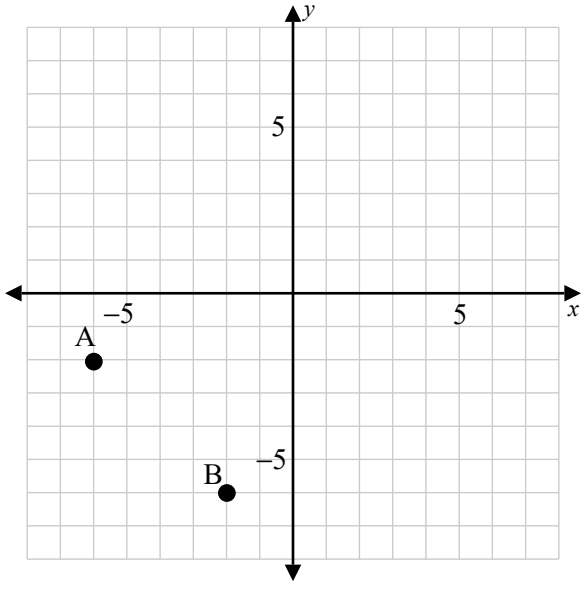
6. Consider the following.

A (−5, −4) B (−1, 1)

a. Plot the given points on the graph.



b. Identify the coordinates of the points A and B on the graph.



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7. Consider the following equation.

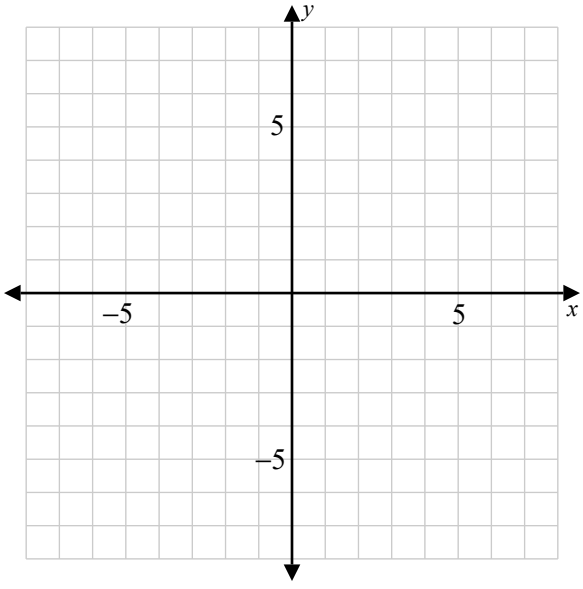
$5x + 5y = 18$

a. Determine the missing coordinate in the ordered pair (2,?) so that it will satisfy the given equation.

b. Determine the missing coordinate in the ordered pair so that it will satisfy the given equation.

8. Graph the line by plotting any two ordered pairs with integer value coordinates that satisfy the equation.

$-9x + 9y = 0$



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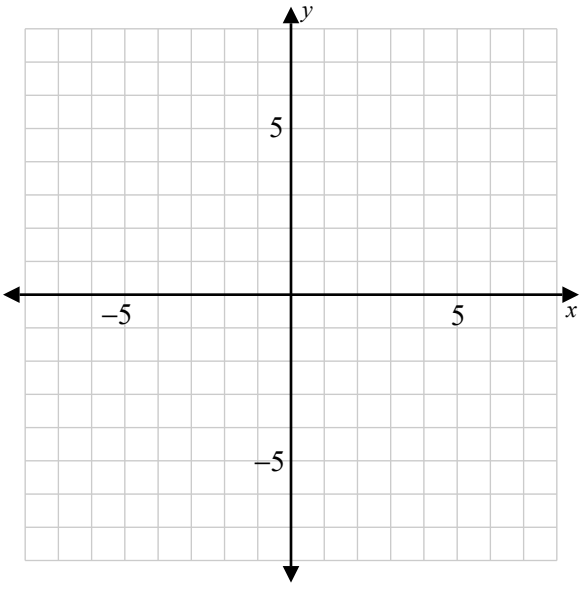
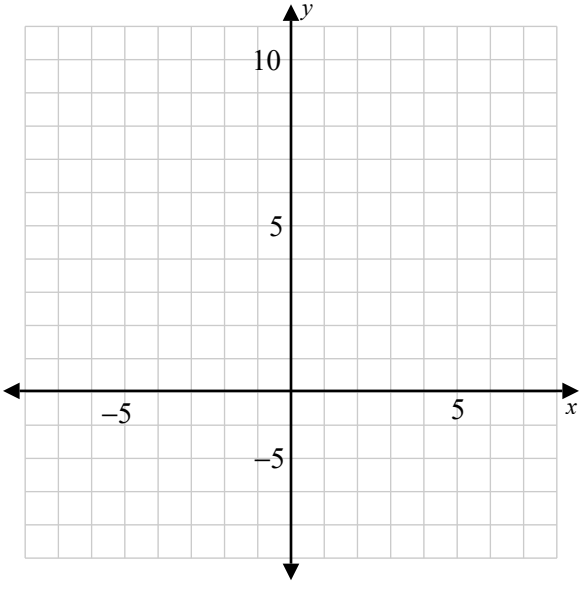
9. Graph the line by plotting any two ordered pairs that satisfy the equation.

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



10. Graph the line by plotting the x-intercept and y-intercept.

$-10x + 5y = 50$



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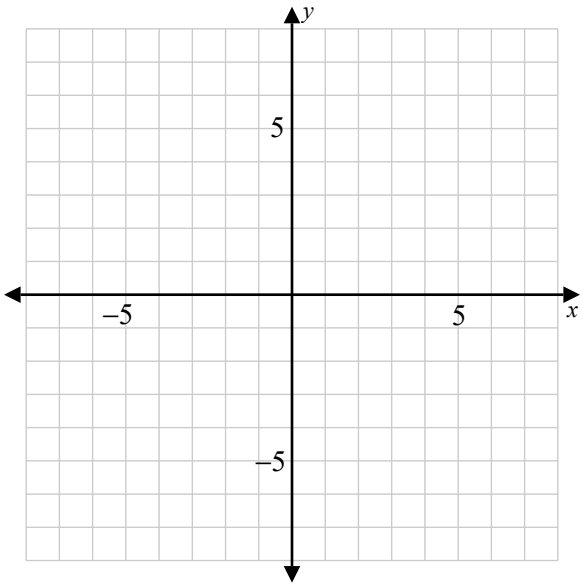
11. Graph the line by plotting the x-intercept and y-intercept.

$-7x + 6y = 16$



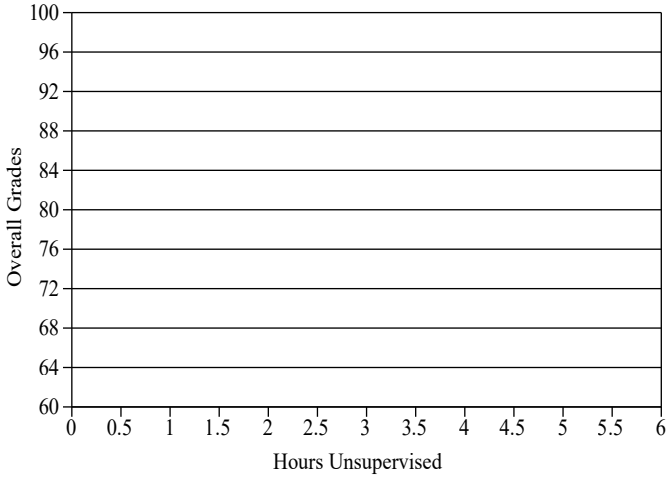
Applications

Solve.

12. The following table gives the average number of hours 7 junior high students were left unsupervised each day and their corresponding overall grade averages.

Hours Unsupervised	0	0.5	1	2.5	3.5	4.5	5
Overall Grades	96	92	88	80	76	72	68

Draw a scatter plot of the given data.



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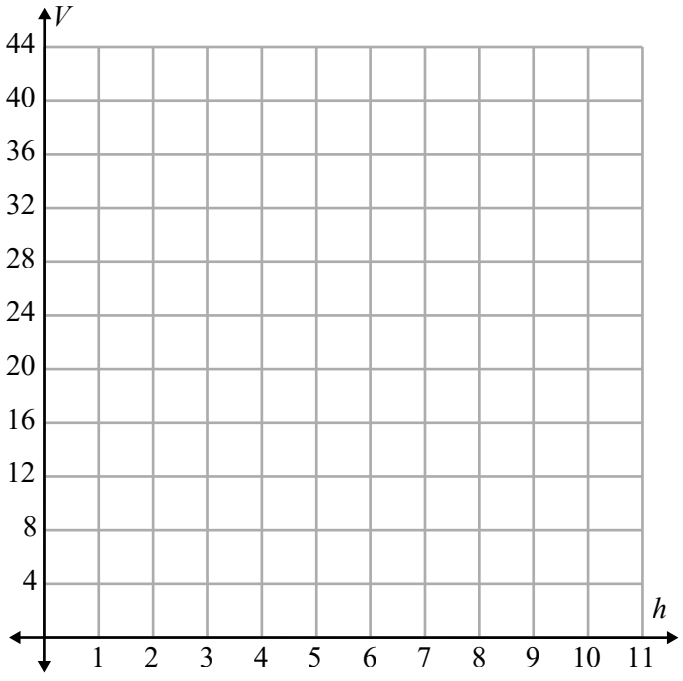
13. Consider the equation $V = 4h$ where V is the volume (in cubic centimeters) of a box with a variable height h in centimeters and a fixed base of area 4 cm^2.

a. Complete the table below so that each ordered pair will satisfy the equation.

h	V
2	
6	
7	
9	

b. Plot the points corresponding to the ordered pairs from the previous part.



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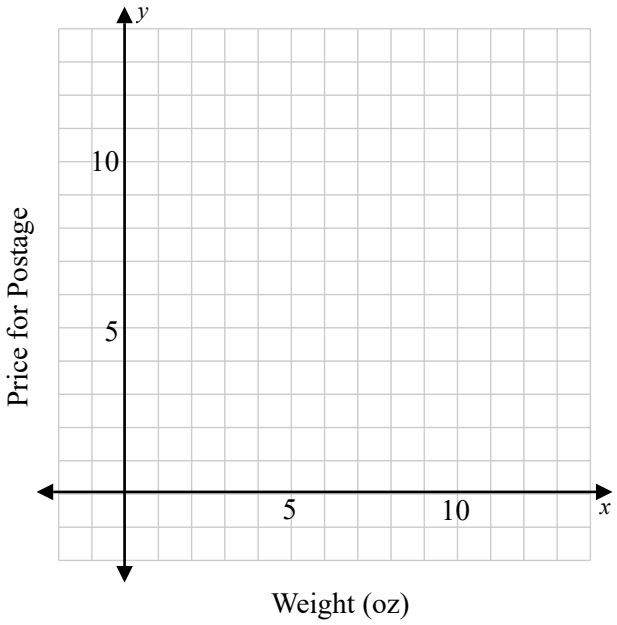
14. To mail a letter to Vienna, Austria the post office charges a flat rate of \$6.50 and an additional \$0.25 for every ounce the letter weighs. The cost of mailing a letter is determined by the equation $y = 0.25x + 6.50$, where y is the cost of the postage and x is the weight of the letter in ounces.

a. Graph the equation by finding two points that satisfy the equation and plotting them on the graph.



b. Use the graph to estimate to the nearest quarter of a dollar (\$0.25) the cost to send a letter that weighs 4 ounces.

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