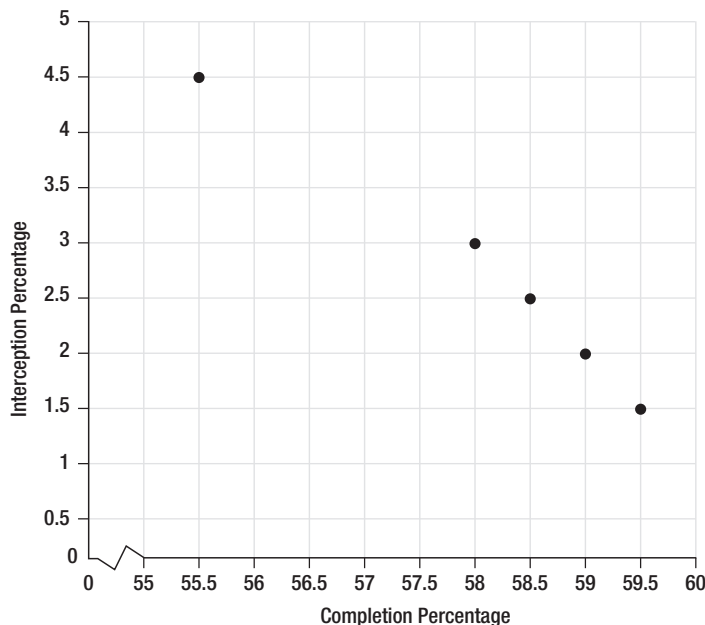


Solution

- a. Since our x -axis is labeled “Completion Percentage”, the values given in the table for the row “Completion Percentage” will be our x -coordinates. Then the corresponding values in the row “Interception Percentage” will be the y -values of each point. For example, our first point would be $(55.5, 4.5)$, so we find 55.5 on the x -axis and 4.5 on the y -axis and place a point at the intersection. This point and the others are shown below.



- b. Looking at the scatter plot from part a., we see that the points form a fairly linear pattern that slopes downward and to the right, i.e., as the completion percentage increases, the interception percentage decreases. Thus, we would say that the data has a negative correlation.

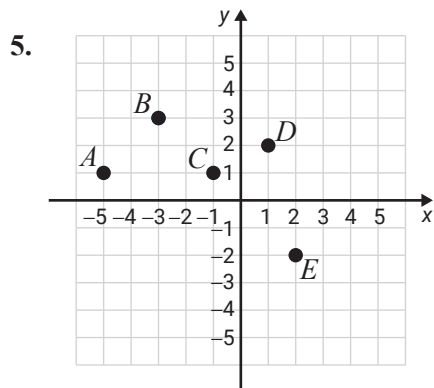
12.R.1 Exercises

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.)

- The graph of every ordered pair that has a positive x -coordinate and a negative y -coordinate can be found in Quadrant IV.
- To find the y -value that corresponds with $x = 2$, substitute 2 for x into the given equation and solve for y .
- If $(-7, 3)$ is a solution of $y = 3x + 24$, then $(-7, 3)$ satisfies $y = 3x + 24$.
- If point $A = (0, 4)$, then point A lies on the x -axis.

Practice

List the set of ordered pairs corresponding to the points on the graph.



Plot each set of ordered pairs and label the points.

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

Determine the missing coordinate in each of the ordered pairs so that the point will satisfy the equation given.

7. $x - 2y = 2$

a. $(0, \underline{\quad})$

b. $(4, \underline{\quad})$

c. $(\underline{\quad}, 0)$

d. $(\underline{\quad}, 3)$

Complete the tables so that each ordered pair will satisfy the given equation. Plot the resulting sets of ordered pairs.

8. $y = 2x - 3$

x	y
0	
	-1
-2	
	3

Determine which, if any, of the ordered pairs satisfy the given equation.

9. $2x - 3y = 7$

a. $(1, 3)$

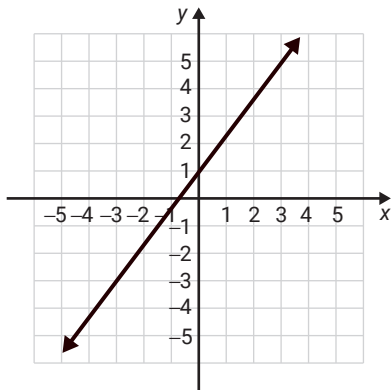
b. $(\frac{1}{2}, -2)$

c. $(\frac{7}{2}, 0)$

d. $(2, 1)$

The graph of a line is shown. List any three points on the line. (There is more than one correct answer.)

10.



Applications

Solve.

11. **Exchange Rates:** At one point in 2017, the exchange rate from US dollars to Euros was $E = 0.85D$ where E is Euros and D is dollars.

a. Make a table of ordered pairs for the values of D and E if D has the values \$100, \$200, \$300, \$400, and \$500.

b. Plot the points corresponding to the ordered pairs.

12. **Temperature:** Given the equation $F = \frac{9}{5}C + 32$ where C is temperature in degrees Celsius and F is the corresponding temperature in degrees Fahrenheit:
- Make a table of ordered pairs for the values of C and F if C has the values -20° , -10° , -5° , 0° , 5° , 10° , and 15° .
 - Plot the points corresponding to the ordered pairs.

13. **Bone Density Scatter Plot:** A study on bone density at a local hospital produced the following results.

Age (in Years), x	34	43	49	51	65
Bone Density (in mg/cm^2), y	946	875	804	723	691

- Draw a scatter plot of the given data set.
- Estimate the correlation in words: positive, negative, or no correlation.