

# Rectangular Coordinates and Graph Reading

Rectangular coordinates, graph reading, circles, lines, scatter diagrams, and linear curve fitting review.

Name \_\_\_\_\_ Date \_\_\_\_\_

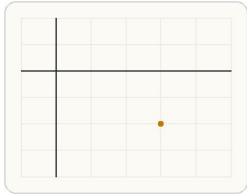
32 main 2-up grid 11 pages visible side quests

## Completion Reward



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### 1. What does the point (3, -2) tell you?



An ordered pair tells horizontal position first and vertical position second, so (3, -2) means right 3 and down 2.

- A. Move 3 units right and 2 units down from the origin.
- B. Move 2 units right and 3 units down from the origin.
- C. Move 3 units left and 2 units up from the origin.
- D. Move 2 units left and 3 units up from the origin.

### 1.3. Which quadrant contains the point (4, -6)?

- A. Quadrant I
- B. Quadrant II
- C. Quadrant III
- D. Quadrant IV

### 2. What is always true at an x-intercept?

- A. The x-value is 0.
- B. The slope is 0.
- C. The y-value is 0.
- D. The graph is a function.

### 2.3. Which equation describes a horizontal line?

- A.  $x = -3$
- B.  $y = -3$
- C.  $y = -3x$
- D.  $x = y - 3$

### 3. What is always true at a y-intercept?

- A. The y-value is 0.
- B. The slope is undefined.
- C. The graph is horizontal.
- D. The x-value is 0.

### 3.3. Which equation describes a horizontal line?

- A.  $x = -3$
- B.  $y = -3$
- C.  $y = -3x$
- D.  $x = y - 3$

### 1.1. What does the point (-2, 5) tell you to do?

- A. left 2, up 5
- B. right 2, up 5
- C. left 5, up 2
- D. down 2, right 5

### 1.4. What are the coordinates of the origin?

- A. (0, 1)
- B. (1, 0)
- C. (0, 0)
- D. (-1, 1)

### 2.1. What is always true at a y-intercept?

- A.  $x = 0$
- B.  $y = 0$
- C. slope = 0
- D. the point is undefined

### 2.4. Which equation describes a vertical line?

- A.  $x = 4$
- B.  $y = 4$
- C.  $y = 4x$
- D.  $x = y + 4$

### 3.1. What is always true at a y-intercept?

- A.  $x = 0$
- B.  $y = 0$
- C. slope = 0
- D. the point is undefined

### 3.4. Which equation describes a vertical line?

- A.  $x = 4$
- B.  $y = 4$
- C.  $y = 4x$
- D.  $x = y + 4$

### 1.2. If a graph contains the point (3, -1), what is the output when $x = 3$ ?

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

### 1.5. In the ordered pair (x, y), which coordinate comes first?

- A. vertical position
- B. horizontal position
- C. output only
- D. the slope

### 2.2. What is always true at an x-intercept?

- A.  $x = 0$
- B.  $y = 0$
- C. slope = 1
- D. the point is in Quadrant I

### 2.5. Which point lies on the y-axis?

- A. (0, 6)
- B. (6, 0)
- C. (6, 6)
- D. (-6, 2)

### 3.2. What is always true at an x-intercept?

- A.  $x = 0$
- B.  $y = 0$
- C. slope = 1
- D. the point is in Quadrant I

### 3.5. Which point lies on the y-axis?

- A. (0, 6)
- B. (6, 0)
- C. (6, 6)
- D. (-6, 2)

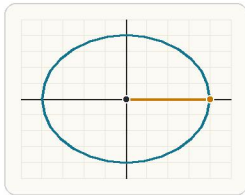
4. How does a line with positive slope move from left to right?

- A. It falls.
- B. It stays flat.
- C. It must curve upward.
- D. It rises.

4.3. A scatterplot that rises overall from left to right suggests:

- A. negative association
- B. no association
- C. positive association
- D. a vertical line

5. What does  $x^2 + y^2 = 16$  represent?



The equation  $x^2 + y^2 = 16$  represents every point whose distance from the origin is 4.

- A. A circle centered at the origin with radius 4
- B. A circle centered at (4, 4) with radius 4
- C. A line through (4, 4)
- D. A parabola opening upward

5.3. What is always true at a y-intercept?

- A.  $x = 0$
- B.  $y = 0$
- C. slope = 0
- D. the graph is vertical

4.1. If a line rises from left to right, its slope is:

- A. negative
- B. zero
- C. positive
- D. undefined

4.4. A line of fit is used to show:

- A. the exact value of every point
- B. the overall trend in the data
- C. the midpoint of the graph
- D. the x-intercept only

5.1. How do you plot (4, -3)?

- A. Right 4, down 3
- B. Up 4, left 3
- C. Left 4, down 3
- D. Right 3, down 4

5.4. A line rises from left to right. What can you say about its slope?

- A. It is negative.
- B. It is zero.
- C. It is positive.
- D. It is undefined.

4.2. If a line falls from left to right, its slope is:

- A. negative
- B. zero
- C. positive
- D. undefined

4.5. A circle centered at the origin is made of all points that are:

- A. on the x-axis
- B. the same distance from the origin
- C. above the line  $y = x$
- D. in Quadrant I

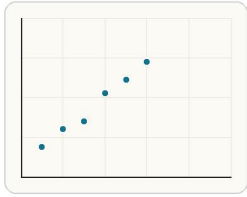
5.2. What is the horizontal distance between (2, 5) and (7, 5)?

- A. 2
- B. 5
- C. 7
- D. 12

5.5. Which quadrant contains the point (-3, 4)?

- A. Quadrant I
- B. Quadrant II
- C. Quadrant III
- D. Quadrant IV

**6. What does positive correlation mean in a scatter plot?**



Positive correlation means larger x-values tend to occur with larger y-values in the data cloud.

- A. As x increases, y tends to increase.
- B. As x increases, y tends to decrease.
- C. All points lie exactly on one line.
- D. The plot must be circular.

**6.3. A scatterplot that rises overall from left to right suggests:**

- A. negative association
- B. no association
- C. positive association
- D. a vertical line

**7. What is the purpose of a line of fit?**

- A. To force every point onto one exact line
- B. To find the x-axis automatically
- C. To model the overall trend of the data
- D. To prove the data are a function

**7.3. A scatterplot that rises overall from left to right suggests:**

- A. negative association
- B. no association
- C. positive association
- D. a vertical line

**8. What does negative correlation mean in a scatter plot?**

- A. As x increases, y tends to increase.
- B. Every point is on the x-axis.
- C. As x increases, y tends to decrease.
- D. The graph must be a circle.

**8.3. A scatterplot that rises overall from left to right suggests:**

- A. negative association
- B. no association
- C. positive association
- D. a vertical line

**6.1. If a line rises from left to right, its slope is:**

- A. negative
- B. zero
- C. positive
- D. undefined

**6.4. A line of fit is used to show:**

- A. the exact value of every point
- B. the overall trend in the data
- C. the midpoint of the graph
- D. the x-intercept only

**7.1. If a line rises from left to right, its slope is:**

- A. negative
- B. zero
- C. positive
- D. undefined

**7.4. A line of fit is used to show:**

- A. the exact value of every point
- B. the overall trend in the data
- C. the midpoint of the graph
- D. the x-intercept only

**8.1. If a line rises from left to right, its slope is:**

- A. negative
- B. zero
- C. positive
- D. undefined

**8.4. A line of fit is used to show:**

- A. the exact value of every point
- B. the overall trend in the data
- C. the midpoint of the graph
- D. the x-intercept only

**6.2. If a line falls from left to right, its slope is:**

- A. negative
- B. zero
- C. positive
- D. undefined

**6.5. A circle centered at the origin is made of all points that are:**

- A. on the x-axis
- B. the same distance from the origin
- C. above the line  $y = x$
- D. in Quadrant I

**7.2. If a line falls from left to right, its slope is:**

- A. negative
- B. zero
- C. positive
- D. undefined

**7.5. A circle centered at the origin is made of all points that are:**

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- B. zero
- C. positive
- D. undefined

**8.5. A circle centered at the origin is made of all points that are:**

- A. on the x-axis
- B. the same distance from the origin
- C. above the line  $y = x$
- D. in Quadrant I

9. Which equation represents a horizontal line through  $y = 4$ ?

- A.  $y = 4$
- B.  $x = 4$
- C.  $y = x + 4$
- D.  $x + y = 4$

9.3. Which equation describes a horizontal line?

- A.  $x = -3$
- B.  $y = -3$
- C.  $y = -3x$
- D.  $x = y - 3$

10. Which equation represents a vertical line through  $x = -2$ ?

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

10.3. Which equation describes a horizontal line?

- A.  $x = -3$
- B.  $y = -3$
- C.  $y = -3x$
- D.  $x = y - 3$

11. Which point lies on  $y = -x + 3$ ?

- A. (2, 2)
- B. (3, 3)
- C. (1, 2)
- D. (0, -3)

11.3. Which quadrant contains the point (4, -6)?

- A. Quadrant I
- B. Quadrant II
- C. Quadrant III
- D. Quadrant IV

9.1. What is always true at a y-intercept?

- A.  $x = 0$
- B.  $y = 0$
- C. slope = 0
- D. the point is undefined

9.4. Which equation describes a vertical line?

- A.  $x = 4$
- B.  $y = 4$
- C.  $y = 4x$
- D.  $x = y + 4$

10.1. What is always true at a y-intercept?

- A.  $x = 0$
- B.  $y = 0$
- C. slope = 0
- D. the point is undefined

10.4. Which equation describes a vertical line?

- A.  $x = 4$
- B.  $y = 4$
- C.  $y = 4x$
- D.  $x = y + 4$

11.1. What does the point (-2, 5) tell you to do?

- A. left 2, up 5
- B. right 2, up 5
- C. left 5, up 2
- D. down 2, right 5

11.4. What are the coordinates of the origin?

- A. (0, 1)
- B. (1, 0)
- C. (0, 0)
- D. (-1, 1)

9.2. What is always true at an x-intercept?

- A.  $x = 0$
- B.  $y = 0$
- C. slope = 1
- D. the point is in Quadrant I

9.5. Which point lies on the y-axis?

- A. (0, 6)
- B. (6, 0)
- C. (6, 6)
- D. (-6, 2)

10.2. What is always true at an x-intercept?

- A.  $x = 0$
- B.  $y = 0$
- C. slope = 1
- D. the point is in Quadrant I

10.5. Which point lies on the y-axis?

- A. (0, 6)
- B. (6, 0)
- C. (6, 6)
- D. (-6, 2)

11.2. If a graph contains the point (3, -1), what is the output when  $x = 3$ ?

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

11.5. In the ordered pair (x, y), which coordinate comes first?

- A. vertical position
- B. horizontal position
- C. output only
- D. the slope

12. Which point lies on  $x^2 + y^2 = 9$ ?

- A. (0, 3)
- B. (2, 2)
- C. (3, 3)
- D. (1, 1)

12.1. What does the point (-2, 5) tell you to do?

- A. left 2, up 5
- B. right 2, up 5
- C. left 5, up 2
- D. down 2, right 5

12.2. If a graph contains the point (3, -1), what is the output when  $x = 3$ ?

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

12.3. Which quadrant contains the point (4, -6)?

- A. Quadrant I
- B. Quadrant II
- C. Quadrant III
- D. Quadrant IV

12.4. What are the coordinates of the origin?

- A. (0, 1)
- B. (1, 0)
- C. (0, 0)
- D. (-1, 1)

12.5. In the ordered pair (x, y), which coordinate comes first?

- A. vertical position
- B. horizontal position
- C. output only
- D. the slope

13. If a data point sits above the line of fit, what is true?

- A. The actual y-value is smaller than the predicted y-value.
- B. The slope must be negative.
- C. The point cannot belong to the data set.
- D. The actual y-value is greater than the predicted y-value.

13.1. What does the point (-2, 5) tell you to do?

- A. left 2, up 5
- B. right 2, up 5
- C. left 5, up 2
- D. down 2, right 5

13.2. If a graph contains the point (3, -1), what is the output when  $x = 3$ ?

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

13.3. Which quadrant contains the point (4, -6)?

- A. Quadrant I
- B. Quadrant II
- C. Quadrant III
- D. Quadrant IV

13.4. What are the coordinates of the origin?

- A. (0, 1)
- B. (1, 0)
- C. (0, 0)
- D. (-1, 1)

13.5. In the ordered pair (x, y), which coordinate comes first?

- A. vertical position
- B. horizontal position
- C. output only
- D. the slope

14. What is the best first step to find the midpoint of two points?

- A. Average the x-values and average the y-values.
- B. Multiply the x-values and add the y-values.
- C. Subtract the x-values only.
- D. Set both x-values equal to 0 first.

14.1. What does the point (-2, 5) tell you to do?

- A. left 2, up 5
- B. right 2, up 5
- C. left 5, up 2
- D. down 2, right 5

14.2. If a graph contains the point (3, -1), what is the output when  $x = 3$ ?

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

14.3. Which quadrant contains the point (4, -6)?

- A. Quadrant I
- B. Quadrant II
- C. Quadrant III
- D. Quadrant IV

14.4. What are the coordinates of the origin?

- A. (0, 1)
- B. (1, 0)
- C. (0, 0)
- D. (-1, 1)

14.5. In the ordered pair (x, y), which coordinate comes first?

- A. vertical position
- B. horizontal position
- C. output only
- D. the slope

**15. A student plots (2, 5) by moving up 2 and right 5. What is the mistake?**

- A. They should always move left first.
- B. They should ignore the second coordinate.
- C. They should start from (1, 1) instead of the origin.
- D. They reversed the x- and y-coordinates.

15.1. What does the point (-2, 5) tell you to do?

- A. left 2, up 5
- B. right 2, up 5
- C. left 5, up 2
- D. down 2, right 5

15.2. If a graph contains the point (3, -1), what is the output when  $x = 3$ ?

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

15.3. Which quadrant contains the point (4, -6)?

- A. Quadrant I
- B. Quadrant II
- C. Quadrant III
- D. Quadrant IV

15.4. What are the coordinates of the origin?

- A. (0, 1)
- B. (1, 0)
- C. (0, 0)
- D. (-1, 1)

15.5. In the ordered pair (x, y), which coordinate comes first?

- A. vertical position
- B. horizontal position
- C. output only
- D. the slope

**16. Find the horizontal distance between (1, 3) and (5, 3). Answer with a number.**

16.1. If a line rises from left to right, its slope is:

- A. negative
- B. zero
- C. positive
- D. undefined

16.2. If a line falls from left to right, its slope is:

- A. negative
- B. zero
- C. positive
- D. undefined

16.3. A scatterplot that rises overall from left to right suggests:

- A. negative association
- B. no association
- C. positive association
- D. a vertical line

16.4. A line of fit is used to show:

- A. the exact value of every point
- B. the overall trend in the data
- C. the midpoint of the graph
- D. the x-intercept only

16.5. A circle centered at the origin is made of all points that are:

- A. on the x-axis
- B. the same distance from the origin
- C. above the line  $y = x$
- D. in Quadrant I

**17. Find the vertical distance between (2, -1) and (2, 4). Answer with a number.**

17.1. If a line rises from left to right, its slope is:

- A. negative
- B. zero
- C. positive
- D. undefined

17.2. If a line falls from left to right, its slope is:

- A. negative
- B. zero
- C. positive
- D. undefined

17.3. A scatterplot that rises overall from left to right suggests:

- A. negative association
- B. no association
- C. positive association
- D. a vertical line

17.4. A line of fit is used to show:

- A. the exact value of every point
- B. the overall trend in the data
- C. the midpoint of the graph
- D. the x-intercept only

17.5. A circle centered at the origin is made of all points that are:

- A. on the x-axis
- B. the same distance from the origin
- C. above the line  $y = x$
- D. in Quadrant I

18. Find the x-coordinate of the midpoint of (0, 2) and (6, 4). Answer with a number.

18.1. What does the point (-2, 5) tell you to do?

- A. left 2, up 5
- B. right 2, up 5
- C. left 5, up 2
- D. down 2, right 5

18.2. If a graph contains the point (3, -1), what is the output when  $x = 3$ ?

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

18.3. Which quadrant contains the point (4, -6)?

- A. Quadrant I
- B. Quadrant II
- C. Quadrant III
- D. Quadrant IV

18.4. What are the coordinates of the origin?

- A. (0, 1)
- B. (1, 0)
- C. (0, 0)
- D. (-1, 1)

18.5. In the ordered pair (x, y), which coordinate comes first?

- A. vertical position
- B. horizontal position
- C. output only
- D. the slope

19. Find the y-coordinate of the midpoint of (0, 2) and (6, 4). Answer with a number.

19.1. What does the point (-2, 5) tell you to do?

- A. left 2, up 5
- B. right 2, up 5
- C. left 5, up 2
- D. down 2, right 5

19.2. If a graph contains the point (3, -1), what is the output when  $x = 3$ ?

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

19.3. Which quadrant contains the point (4, -6)?

- A. Quadrant I
- B. Quadrant II
- C. Quadrant III
- D. Quadrant IV

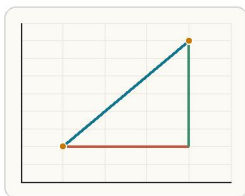
19.4. What are the coordinates of the origin?

- A. (0, 1)
- B. (1, 0)
- C. (0, 0)
- D. (-1, 1)

19.5. In the ordered pair (x, y), which coordinate comes first?

- A. vertical position
- B. horizontal position
- C. output only
- D. the slope

20. Find the slope of the line through (1, 2) and (4, 8). Answer with a number.



Use the change in y and the change in x between the two points to find slope.

20.1. What does the point (-2, 5) tell you to do?

- A. left 2, up 5
- B. right 2, up 5
- C. left 5, up 2
- D. down 2, right 5

20.2. If a graph contains the point (3, -1), what is the output when  $x = 3$ ?

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

20.3. Which quadrant contains the point (4, -6)?

- A. Quadrant I
- B. Quadrant II
- C. Quadrant III
- D. Quadrant IV

20.4. What are the coordinates of the origin?

- A. (0, 1)
- B. (1, 0)
- C. (0, 0)
- D. (-1, 1)

20.5. In the ordered pair (x, y), which coordinate comes first?

- A. vertical position
- B. horizontal position
- C. output only
- D. the slope

21. If  $y = 2x + 1$ , find  $y$  when  $x = 3$ . Answer with a number.

21.1. If a line rises from left to right, its slope is:

- A. negative
- B. zero
- C. positive
- D. undefined

21.2. If a line falls from left to right, its slope is:

- A. negative
- B. zero
- C. positive
- D. undefined

21.3. A scatterplot that rises overall from left to right suggests:

- A. negative association
- B. no association
- C. positive association
- D. a vertical line

21.4. A line of fit is used to show:

- A. the exact value of every point
- B. the overall trend in the data
- C. the midpoint of the graph
- D. the x-intercept only

21.5. A circle centered at the origin is made of all points that are:

- A. on the x-axis
- B. the same distance from the origin
- C. above the line  $y = x$
- D. in Quadrant I

22. For  $x^2 + y^2 = 25$ , what is the radius? Answer with a number.

22.1. If a line rises from left to right, its slope is:

- A. negative
- B. zero
- C. positive
- D. undefined

22.2. If a line falls from left to right, its slope is:

- A. negative
- B. zero
- C. positive
- D. undefined

22.3. A scatterplot that rises overall from left to right suggests:

- A. negative association
- B. no association
- C. positive association
- D. a vertical line

22.4. A line of fit is used to show:

- A. the exact value of every point
- B. the overall trend in the data
- C. the midpoint of the graph
- D. the x-intercept only

22.5. A circle centered at the origin is made of all points that are:

- A. on the x-axis
- B. the same distance from the origin
- C. above the line  $y = x$
- D. in Quadrant I

23. For  $y = -3x + 7$ , what is the y-intercept? Answer with a number.

23.1. What is always true at a y-intercept?

- A.  $x = 0$
- B.  $y = 0$
- C. slope = 0
- D. the point is undefined

23.2. What is always true at an x-intercept?

- A.  $x = 0$
- B.  $y = 0$
- C. slope = 1
- D. the point is in Quadrant I

23.3. Which equation describes a horizontal line?

- A.  $x = -3$
- B.  $y = -3$
- C.  $y = -3x$
- D.  $x = y - 3$

23.4. Which equation describes a vertical line?

- A.  $x = 4$
- B.  $y = 4$
- C.  $y = 4x$
- D.  $x = y + 4$

23.5. Which point lies on the y-axis?

- A. (0, 6)
- B. (6, 0)
- C. (6, 6)
- D. (-6, 2)

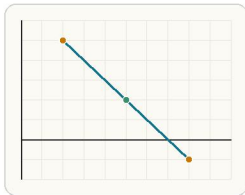
24. Which student correctly finds the slope through (2, 1) and (5, 7)?

- A. Student B: slope =  $(5 - 2) / (7 - 1) = 3 / 6 = 0.5$ .
- B. Student C: slope =  $7 - 5 = 2$ .
- C. Student A: slope =  $(7 - 1) / (5 - 2) = 6 / 3 = 2$ .
- D. Student D: slope =  $2 + 1 + 5 + 7$ .

24.3. A scatterplot that rises overall from left to right suggests:

- A. negative association
- B. no association
- C. positive association
- D. a vertical line

25. Find the midpoint of (2, 5) and (8, -1). Answer as an ordered pair.



The midpoint is halfway between the endpoints in both the horizontal and vertical directions.

25.3. Which quadrant contains the point (4, -6)?

- A. Quadrant I
- B. Quadrant II
- C. Quadrant III
- D. Quadrant IV

26. Write the equation of the horizontal line through  $y = -3$ . Answer in the form  $y = \dots$

- A.  $x = -3$
- B.  $y = -3$
- C.  $y = -3x$
- D.  $x = y - 3$

24.1. If a line rises from left to right, its slope is:

- A. negative
- B. zero
- C. positive
- D. undefined

24.4. A line of fit is used to show:

- A. the exact value of every point
- B. the overall trend in the data
- C. the midpoint of the graph
- D. the x-intercept only

25.1. What does the point (-2, 5) tell you to do?

- A. left 2, up 5
- B. right 2, up 5
- C. left 5, up 2
- D. down 2, right 5

25.4. What are the coordinates of the origin?

- A. (0, 1)
- B. (1, 0)
- C. (0, 0)
- D. (-1, 1)

26.1. What is always true at a y-intercept?

- A.  $x = 0$
- B.  $y = 0$
- C. slope = 0
- D. the point is undefined

26.4. Which equation describes a vertical line?

- A.  $x = 4$
- B.  $y = 4$
- C.  $y = 4x$
- D.  $x = y + 4$

24.2. If a line falls from left to right, its slope is:

- A. negative
- B. zero
- C. positive
- D. undefined

24.5. A circle centered at the origin is made of all points that are:

- A. on the x-axis
- B. the same distance from the origin
- C. above the line  $y = x$
- D. in Quadrant I

25.2. If a graph contains the point (3, -1), what is the output when  $x = 3$ ?

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

25.5. In the ordered pair (x, y), which coordinate comes first?

- A. vertical position
- B. horizontal position
- C. output only
- D. the slope

26.2. What is always true at an x-intercept?

- A.  $x = 0$
- B.  $y = 0$
- C. slope = 1
- D. the point is in Quadrant I

26.5. Which point lies on the y-axis?

- A. (0, 6)
- B. (6, 0)
- C. (6, 6)
- D. (-6, 2)

27. Write the equation of the vertical line through  $x = 4$ . Answer in the form  $x = \dots$

27.1. What is always true at a y-intercept?

- A.  $x = 0$
- B.  $y = 0$
- C. slope = 0
- D. the point is undefined

27.2. What is always true at an x-intercept?

- A.  $x = 0$
- B.  $y = 0$
- C. slope = 1
- D. the point is in Quadrant I

27.3. Which equation describes a horizontal line?

- A.  $x = -3$
- B.  $y = -3$
- C.  $y = -3x$
- D.  $x = y - 3$

27.4. Which equation describes a vertical line?

- A.  $x = 4$
- B.  $y = 4$
- C.  $y = 4x$
- D.  $x = y + 4$

27.5. Which point lies on the y-axis?

- A. (0, 6)
- B. (6, 0)
- C. (6, 6)
- D. (-6, 2)

28. Write the equation of the circle centered at the origin with radius 4. Answer as an equation.

28.1. What is always true at a y-intercept?

- A.  $x = 0$
- B.  $y = 0$
- C. slope = 0
- D. the point is undefined

28.2. What is always true at an x-intercept?

- A.  $x = 0$
- B.  $y = 0$
- C. slope = 1
- D. the point is in Quadrant I

28.3. Which equation describes a horizontal line?

- A.  $x = -3$
- B.  $y = -3$
- C.  $y = -3x$
- D.  $x = y - 3$

28.4. Which equation describes a vertical line?

- A.  $x = 4$
- B.  $y = 4$
- C.  $y = 4x$
- D.  $x = y + 4$

28.5. Which point lies on the y-axis?

- A. (0, 6)
- B. (6, 0)
- C. (6, 6)
- D. (-6, 2)

29. Write the equation of the line with slope 3 and y-intercept 2. Answer in the form  $y = \dots$

29.1. What is always true at a y-intercept?

- A.  $x = 0$
- B.  $y = 0$
- C. slope = 0
- D. the point is undefined

29.2. What is always true at an x-intercept?

- A.  $x = 0$
- B.  $y = 0$
- C. slope = 1
- D. the point is in Quadrant I

29.3. Which equation describes a horizontal line?

- A.  $x = -3$
- B.  $y = -3$
- C.  $y = -3x$
- D.  $x = y - 3$

29.4. Which equation describes a vertical line?

- A.  $x = 4$
- B.  $y = 4$
- C.  $y = 4x$
- D.  $x = y + 4$

29.5. Which point lies on the y-axis?

- A. (0, 6)
- B. (6, 0)
- C. (6, 6)
- D. (-6, 2)

30. For the line  $y = 2x - 6$ , state the x-intercept as an equation in x. Answer with your final expression.

30.1. What is always true at a y-intercept?

- A.  $x = 0$
- B.  $y = 0$
- C. slope = 0
- D. the point is undefined

30.2. What is always true at an x-intercept?

- A.  $x = 0$
- B.  $y = 0$
- C. slope = 1
- D. the point is in Quadrant I

30.3. Which equation describes a horizontal line?

- A.  $x = -3$
- B.  $y = -3$
- C.  $y = -3x$
- D.  $x = y - 3$

30.4. Which equation describes a vertical line?

- A.  $x = 4$
- B.  $y = 4$
- C.  $y = 4x$
- D.  $x = y + 4$

30.5. Which point lies on the y-axis?

- A. (0, 6)
- B. (6, 0)
- C. (6, 6)
- D. (-6, 2)

31. Find the midpoint of (-1, 1) and (5, 7). Answer as an ordered pair.

31.1. What does the point (-2, 5) tell you to do?

- A. left 2, up 5
- B. right 2, up 5
- C. left 5, up 2
- D. down 2, right 5

31.2. If a graph contains the point (3, -1), what is the output when  $x = 3$ ?

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

31.3. Which quadrant contains the point (4, -6)?

- A. Quadrant I
- B. Quadrant II
- C. Quadrant III
- D. Quadrant IV

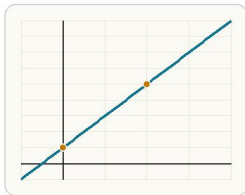
31.4. What are the coordinates of the origin?

- A. (0, 1)
- B. (1, 0)
- C. (0, 0)
- D. (-1, 1)

31.5. In the ordered pair (x, y), which coordinate comes first?

- A. vertical position
- B. horizontal position
- C. output only
- D. the slope

32. Write the equation of the line through (0, 1) and (2, 5). Answer in the form  $y = \dots$



From the two points, determine the slope and then use the point with  $x = 0$  to identify the y-intercept.

32.1. What does the point (-2, 5) tell you to do?

- A. left 2, up 5
- B. right 2, up 5
- C. left 5, up 2
- D. down 2, right 5

32.2. If a graph contains the point (3, -1), what is the output when  $x = 3$ ?

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

32.3. Which quadrant contains the point (4, -6)?

- A. Quadrant I
- B. Quadrant II
- C. Quadrant III
- D. Quadrant IV

32.4. What are the coordinates of the origin?

- A. (0, 1)
- B. (1, 0)
- C. (0, 0)
- D. (-1, 1)

32.5. In the ordered pair (x, y), which coordinate comes first?

- A. vertical position
- B. horizontal position
- C. output only
- D. the slope