

Worksheet 3.R2: Other Forms of Linearity Review | Chapter 3

Learning Goal: I can write an equation in point-slope form.

1. Write an equation in point-slope form and slope intercept form for the line that passes through $(-3, -5)$, slope = 2

1.
Point-Slope: _____
Slope Intercept: _____

2. Write an equation in point-slope form and slope intercept form for the line that passes through $(1, -1)$, and $(2, 0)$

2.
Point-Slope: _____
Slope Intercept: _____

3. Write an equation in point-slope form and slope intercept form for the line that passes through $(6, -6)$, slope of 2

3.
Point-Slope: _____
Slope Intercept: _____

4. Write an equation in point-slope form and slope intercept form for the line that passes through $(-5, 9)$ and $(1, 3)$

4.
Point-Slope: _____
Slope Intercept: _____

5. Write an equation in point-slope form and slope intercept form for the line that passes through $(0, 1)$ and $(2, 5)$

5.
Point-Slope: _____
Slope Intercept: _____

Learning Goal: I can solve for a specific variable; I can solve a system of equations by substitution. (8.EE.8b, c)

6. Solve for y and x **algebraically** given the following information:

$$y = x + 20$$

$$y = 6x$$

6.
 $x =$ _____
 $y =$ _____

7. Solve for y and x using **substitution** given the following information:

$$y = x - 4$$

$$y = 2x$$

7.
 $x =$ _____
 $y =$ _____

8. Solve for y and x given the following information:

$$y = x - 4$$

$$y = 2x$$

8.
 $x =$ _____
 $y =$ _____

Learning Goal: I can find the x- and y-intercepts of a linear equation. (8.EE.8c)

9. State the x- and y-intercepts of the function:

$$-\frac{1}{4}x - \frac{1}{3}y = 12$$

10. State the x- and y-intercepts of the function:

$$x + y = 1$$

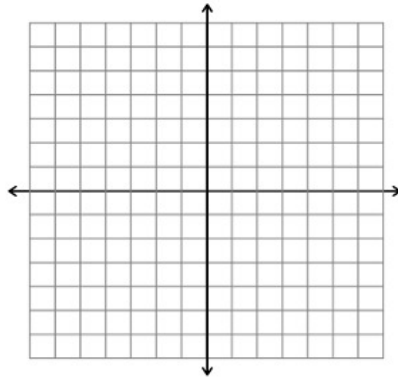
11. State the x- and y-intercepts of the function:

$$6x + 2y = -18$$

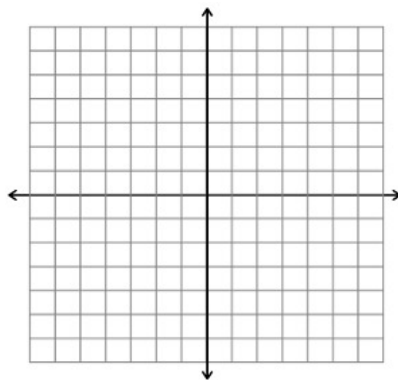
Learning Goal: I can solve a system of equations by graphing. (8.EE.8a, b, c)

Solve each system of equation by graphing.

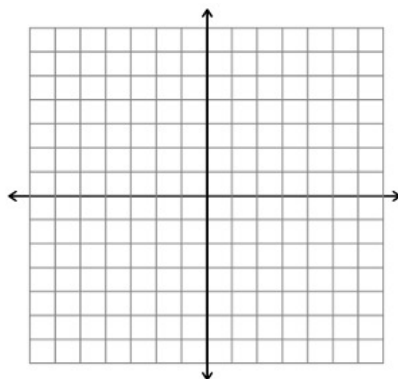
12. $y = 2x$
 $y = x + 1$



13. $y = x + 3$
 $y = -2x - 3$

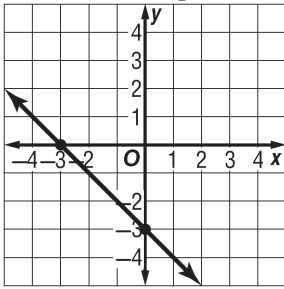


14. $y - 6 = 2x$
 $y = 2(x + 1) + 4$



Learning Goal: I can write a linear equation from a table, graph, and a real-world situation. (8.EE.8c)

15. Write the point-slope form of an equation for the line graphed.



16. The table shows the temperature at certain hours. Assuming the temperature change is linear, write an equation in point-slope form to represent the temperature y at hour x .

Hour	Temperature (°F)
1	81
2	87
3	93

17. After 2 hours, a car travels 65 miles. After 2.25 hours in the same trip, the car travels 71.25 miles. Write an equation in point-slope form to represent the distance y of the car after x hours.

Learning Goal: I can write a system of linear equations.

18. Two small pitchers and one large pitcher can hold 9 cups of water. One large pitcher minus one small pitcher constitutes 3 cups of water. How many cups of water can each pitcher hold?