

## Identifying Point of Intersection with Equations

Name: \_\_\_\_\_

For each system of equations determine the point of intersection in a graph.

Answers

1) 
$$\begin{cases} y = 1.5x + 2 \\ y = 5.5x - 6 \end{cases}$$

2) 
$$\begin{cases} y = 0.7x - 2 \\ y = 0.6x - 3 \end{cases}$$

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_

3) 
$$\begin{cases} y = -0.5x - 4 \\ y = -0.6x - 3 \end{cases}$$

4) 
$$\begin{cases} y = -4.5x - 9 \\ y = -3.25x - 4 \end{cases}$$

5) 
$$\begin{cases} y = -0.5x - 5 \\ y = 0.9x + 9 \end{cases}$$

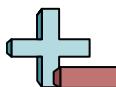
6) 
$$\begin{cases} y = 0.1x - 1 \\ y = -0.5x + 5 \end{cases}$$

7) 
$$\begin{cases} y = 0.1x + 9 \\ y = -0.2x + 6 \end{cases}$$

8) 
$$\begin{cases} y = 0.5x - 5 \\ y = 0.75x - 7 \end{cases}$$

9) 
$$\begin{cases} y = -0.5x + 2 \\ y = 2.25x - 9 \end{cases}$$

10) 
$$\begin{cases} y = 4.25x - 9 \\ y = 3.25x - 5 \end{cases}$$



## Identifying Point of Intersection with Equations

Name: **Answer Key**

For each system of equations determine the point of intersection in a graph.

1) 
$$\begin{cases} y = 1.5x + 2 \\ y = 5.5x - 6 \end{cases}$$

$$1.5x + 2 = 5.5x - 6$$

$$-4x = -8$$

$$1x = 2$$

$$y = (1.5 \times 2) + 2$$

$$y = (5.5 \times 2) - 6$$

2) 
$$\begin{cases} y = 0.7x - 2 \\ y = 0.6x - 3 \end{cases}$$

$$0.7x - 2 = 0.6x - 3$$

$$0.1x = -1$$

$$1x = -10$$

$$y = (0.7 \times -10) - 2$$

$$y = (0.6 \times -10) - 3$$

3) 
$$\begin{cases} y = -0.5x - 4 \\ y = -0.6x - 3 \end{cases}$$

$$-0.5x - 4 = -0.6x - 3$$

$$0.1x = 1$$

$$1x = 10$$

$$y = (-0.5 \times 10) - 4$$

$$y = (-0.6 \times 10) - 3$$

4) 
$$\begin{cases} y = -4.5x - 9 \\ y = -3.25x - 4 \end{cases}$$

$$-4.5x - 9 = -3.25x - 4$$

$$-1.25x = 5$$

$$1x = -4$$

$$y = (-4.5 \times -4) - 9$$

$$y = (-3.25 \times -4) - 4$$

5) 
$$\begin{cases} y = -0.5x - 5 \\ y = 0.9x + 9 \end{cases}$$

$$-0.5x - 5 = 0.9x + 9$$

$$-1.4x = 14$$

$$1x = -10$$

$$y = (-0.5 \times -10) - 5$$

$$y = (0.9 \times -10) + 9$$

6) 
$$\begin{cases} y = 0.1x - 1 \\ y = -0.5x + 5 \end{cases}$$

$$0.1x - 1 = -0.5x + 5$$

$$0.6x = 6$$

$$1x = 10$$

$$y = (0.1 \times 10) - 1$$

$$y = (-0.5 \times 10) + 5$$

7) 
$$\begin{cases} y = 0.1x + 9 \\ y = -0.2x + 6 \end{cases}$$

$$0.1x + 9 = -0.2x + 6$$

$$0.3x = -3$$

$$1x = -10$$

$$y = (0.1 \times -10) + 9$$

$$y = (-0.2 \times -10) + 6$$

8) 
$$\begin{cases} y = 0.5x - 5 \\ y = 0.75x - 7 \end{cases}$$

$$0.5x - 5 = 0.75x - 7$$

$$-0.25x = -2$$

$$1x = 8$$

$$y = (0.5 \times 8) - 5$$

$$y = (0.75 \times 8) - 7$$

9) 
$$\begin{cases} y = -0.5x + 2 \\ y = 2.25x - 9 \end{cases}$$

$$-0.5x + 2 = 2.25x - 9$$

$$-2.75x = -11$$

$$1x = 4$$

$$y = (-0.5 \times 4) + 2$$

$$y = (2.25 \times 4) - 9$$

10) 
$$\begin{cases} y = 4.25x - 9 \\ y = 3.25x - 5 \end{cases}$$

$$4.25x - 9 = 3.25x - 5$$

$$1x = 4$$

$$1x = 4$$

$$y = (4.25 \times 4) - 9$$

$$y = (3.25 \times 4) - 5$$

**Answers**1. (2, 5)2. (-10, -9)3. (10, -9)4. (-4, 9)5. (-10, 0)6. (10, 0)7. (-10, 8)8. (8, -1)9. (4, 0)10. (4, 8)