



## Identifying Point of Intersection with Equations

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

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

Answers

1) 
$$\begin{cases} y = -0.6x + 6 \\ y = -0.2x + 2 \end{cases}$$

2) 
$$\begin{cases} y = -2.75x + 1 \\ y = -1.75x - 3 \end{cases}$$

3) 
$$\begin{cases} y = -0.2x + 9 \\ y = 0.2x + 5 \end{cases}$$

4) 
$$\begin{cases} y = 1.25x - 3 \\ y = 1.5x - 4 \end{cases}$$

5) 
$$\begin{cases} y = 0.2x + 8 \\ y = -0.3x + 3 \end{cases}$$

6) 
$$\begin{cases} y = 1.8x + 2 \\ y = -0.2x - 8 \end{cases}$$

7) 
$$\begin{cases} y = -2.25x + 6 \\ y = -2.75x + 8 \end{cases}$$

8) 
$$\begin{cases} y = 0.5x + 2 \\ y = -0.75x - 3 \end{cases}$$

9) 
$$\begin{cases} y = 0.25x + 2 \\ y = 1.25x + 6 \end{cases}$$

10) 
$$\begin{cases} y = -1.2x - 2 \\ y = -0.2x + 3 \end{cases}$$

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

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

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

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

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

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

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

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

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

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



## Identifying Point of Intersection with Equations

Name: **Answer Key**

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

**Answers**

1) 
$$\begin{cases} y = -0.6x + 6 \\ y = -0.2x + 2 \end{cases}$$
  

$$-0.6x+6 = -0.2x+2$$
  

$$-0.4x = -4$$
  

$$1x = 10$$
  

$$y = (-0.6 \times 10) + 6$$
  

$$y = (-0.2 \times 10) + 2$$

2) 
$$\begin{cases} y = -2.75x + 1 \\ y = -1.75x - 3 \end{cases}$$
  

$$-2.75x+1 = -1.75x-3$$
  

$$-1x = -4$$
  

$$1x = 4$$
  

$$y = (-2.75 \times 4) + 1$$
  

$$y = (-1.75 \times 4) - 3$$

3) 
$$\begin{cases} y = -0.2x + 9 \\ y = 0.2x + 5 \end{cases}$$
  

$$-0.2x+9 = 0.2x+5$$
  

$$-0.4x = -4$$
  

$$1x = 10$$
  

$$y = (-0.2 \times 10) + 9$$
  

$$y = (0.2 \times 10) + 5$$

4) 
$$\begin{cases} y = 1.25x - 3 \\ y = 1.5x - 4 \end{cases}$$
  

$$1.25x-3 = 1.5x-4$$
  

$$-0.25x = -1$$
  

$$1x = 4$$
  

$$y = (1.25 \times 4) - 3$$
  

$$y = (1.5 \times 4) - 4$$

5) 
$$\begin{cases} y = 0.2x + 8 \\ y = -0.3x + 3 \end{cases}$$
  

$$0.2x+8 = -0.3x+3$$
  

$$0.5x = -5$$
  

$$1x = -10$$
  

$$y = (0.2 \times -10) + 8$$
  

$$y = (-0.3 \times -10) + 3$$

6) 
$$\begin{cases} y = 1.8x + 2 \\ y = -0.2x - 8 \end{cases}$$
  

$$1.8x+2 = -0.2x-8$$
  

$$2x = -10$$
  

$$1x = -5$$
  

$$y = (1.8 \times -5) + 2$$
  

$$y = (-0.2 \times -5) - 8$$

7) 
$$\begin{cases} y = -2.25x + 6 \\ y = -2.75x + 8 \end{cases}$$
  

$$-2.25x+6 = -2.75x+8$$
  

$$0.5x = 2$$
  

$$1x = 4$$
  

$$y = (-2.25 \times 4) + 6$$
  

$$y = (-2.75 \times 4) + 8$$

8) 
$$\begin{cases} y = 0.5x + 2 \\ y = -0.75x - 3 \end{cases}$$
  

$$0.5x+2 = -0.75x-3$$
  

$$1.25x = -5$$
  

$$1x = -4$$
  

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

$$y = (-0.75 \times -4) - 3$$

9) 
$$\begin{cases} y = 0.25x + 2 \\ y = 1.25x + 6 \end{cases}$$
  

$$0.25x+2 = 1.25x+6$$
  

$$-1x = 4$$
  

$$1x = -4$$
  

$$y = (0.25 \times -4) + 2$$
  

$$y = (1.25 \times -4) + 6$$

10) 
$$\begin{cases} y = -1.2x - 2 \\ y = -0.2x + 3 \end{cases}$$
  

$$-1.2x-2 = -0.2x+3$$
  

$$-1x = 5$$
  

$$1x = -5$$
  

$$y = (-1.2 \times -5) - 2$$
  

$$y = (-0.2 \times -5) + 3$$

1. (10, 0)
2. (4, -10)
3. (10, 7)
4. (4, 2)

5. (-10, 6)
6. (-5, -7)
7. (4, -3)
8. (-4, 0)

9. (-4, 1)

10. (-5, 4)