



## Identifying Point of Intersection with Equations

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

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

Answers

1) 
$$\begin{cases} y = -0.1x - 1 \\ y = 0.4x - 6 \end{cases}$$

2) 
$$\begin{cases} y = 0.9x + 6 \\ y = 0.1x - 2 \end{cases}$$

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

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

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

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

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

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

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

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

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

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

3) 
$$\begin{cases} y = -2.75x + 2 \\ y = -4.25x + 8 \end{cases}$$

4) 
$$\begin{cases} y = -0.25x + 8 \\ y = -2.5x - 1 \end{cases}$$

5) 
$$\begin{cases} y = 0.7x + 8 \\ y = 0.2x + 3 \end{cases}$$

6) 
$$\begin{cases} y = 0.5x - 2 \\ y = 0.9x - 6 \end{cases}$$

7) 
$$\begin{cases} y = 0.2x + 0 \\ y = 0.6x - 4 \end{cases}$$

8) 
$$\begin{cases} y = 0.5x + 5 \\ y = -0.25x + 2 \end{cases}$$

9) 
$$\begin{cases} y = 0.5x - 4 \\ y = 0.1x - 8 \end{cases}$$

10) 
$$\begin{cases} y = -1.75x + 5 \\ y = -0.75x + 1 \end{cases}$$



## Identifying Point of Intersection with Equations

Name: **Answer Key**

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

1) 
$$\begin{cases} y = -0.1x - 1 \\ y = 0.4x - 6 \end{cases}$$

$$-0.1x - 1 = 0.4x - 6$$

$$-0.5x = -5$$

$$1x = 10$$

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

$$y = (0.4 \times 10) - 6$$

2) 
$$\begin{cases} y = 0.9x + 6 \\ y = 0.1x - 2 \end{cases}$$

$$0.9x + 6 = 0.1x - 2$$

$$0.8x = -8$$

$$1x = -10$$

$$y = (0.9 \times -10) + 6$$

$$y = (0.1 \times -10) - 2$$

3) 
$$\begin{cases} y = -2.75x + 2 \\ y = -4.25x + 8 \end{cases}$$

$$-2.75x + 2 = -4.25x + 8$$

$$1.5x = 6$$

$$1x = 4$$

$$y = (-2.75 \times 4) + 2$$

$$y = (-4.25 \times 4) + 8$$

4) 
$$\begin{cases} y = -0.25x + 8 \\ y = -2.5x - 1 \end{cases}$$

$$-0.25x + 8 = -2.5x - 1$$

$$2.25x = -9$$

$$1x = -4$$

$$y = (-0.25 \times -4) + 8$$

$$y = (-2.5 \times -4) - 1$$

5) 
$$\begin{cases} y = 0.7x + 8 \\ y = 0.2x + 3 \end{cases}$$

$$0.7x + 8 = 0.2x + 3$$

$$0.5x = -5$$

$$1x = -10$$

$$y = (0.7 \times -10) + 8$$

$$y = (0.2 \times -10) + 3$$

6) 
$$\begin{cases} y = 0.5x - 2 \\ y = 0.9x - 6 \end{cases}$$

$$0.5x - 2 = 0.9x - 6$$

$$-0.4x = -4$$

$$1x = 10$$

$$y = (0.5 \times 10) - 2$$

$$y = (0.9 \times 10) - 6$$

7) 
$$\begin{cases} y = 0.2x + 0 \\ y = 0.6x - 4 \end{cases}$$

$$0.2x + 0 = 0.6x - 4$$

$$-0.4x = -4$$

$$1x = 10$$

$$y = (0.2 \times 10) + 0$$

$$y = (0.6 \times 10) - 4$$

8) 
$$\begin{cases} y = 0.5x + 5 \\ y = -0.25x + 2 \end{cases}$$

$$0.5x + 5 = -0.25x + 2$$

$$0.75x = -3$$

$$1x = -4$$

$$y = (0.5 \times -4) + 5$$

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

9) 
$$\begin{cases} y = 0.5x - 4 \\ y = 0.1x - 8 \end{cases}$$

$$0.5x - 4 = 0.1x - 8$$

$$0.4x = -4$$

$$1x = -10$$

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

$$y = (0.1 \times -10) - 8$$

10) 
$$\begin{cases} y = -1.75x + 5 \\ y = -0.75x + 1 \end{cases}$$

$$-1.75x + 5 = -0.75x + 1$$

$$-1x = -4$$

$$1x = 4$$

$$y = (-1.75 \times 4) + 5$$

$$y = (-0.75 \times 4) + 1$$

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