



## Identifying Point of Intersection with Equations

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

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

Answers

1) 
$$\begin{cases} y = -1.3x - 3 \\ y = -0.4x + 6 \end{cases}$$

2) 
$$\begin{cases} y = 1.75x + 1 \\ y = 3.25x - 5 \end{cases}$$

3) 
$$\begin{cases} y = -1.5x + 4 \\ y = -1.75x + 5 \end{cases}$$

4) 
$$\begin{cases} y = 1.25x + 2 \\ y = 0.5x - 1 \end{cases}$$

5) 
$$\begin{cases} y = -0.25x + 8 \\ y = -2.25x + 0 \end{cases}$$

6) 
$$\begin{cases} y = 0.25x + 7 \\ y = -0.5x + 4 \end{cases}$$

7) 
$$\begin{cases} y = -0.25x - 5 \\ y = -0.75x - 9 \end{cases}$$

8) 
$$\begin{cases} y = 0.7x - 3 \\ y = 0.6x - 2 \end{cases}$$

9) 
$$\begin{cases} y = 0.25x + 2 \\ y = 0.5x + 1 \end{cases}$$

10) 
$$\begin{cases} y = -2.5x + 0 \\ y = -0.5x + 8 \end{cases}$$

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.

1) 
$$\begin{cases} y = -1.3x - 3 \\ y = -0.4x + 6 \end{cases}$$

$$-1.3x - 3 = -0.4x + 6$$

$$-0.9x = 9$$

$$1x = -10$$

$$y = (-1.3 \times -10) - 3$$

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

2) 
$$\begin{cases} y = 1.75x + 1 \\ y = 3.25x - 5 \end{cases}$$

$$1.75x + 1 = 3.25x - 5$$

$$-1.5x = -6$$

$$1x = 4$$

$$y = (1.75 \times 4) + 1$$

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

3) 
$$\begin{cases} y = -1.5x + 4 \\ y = -1.75x + 5 \end{cases}$$

$$-1.5x + 4 = -1.75x + 5$$

$$0.25x = 1$$

$$1x = 4$$

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

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

4) 
$$\begin{cases} y = 1.25x + 2 \\ y = 0.5x - 1 \end{cases}$$

$$1.25x + 2 = 0.5x - 1$$

$$0.75x = -3$$

$$1x = -4$$

$$y = (1.25 \times -4) + 2$$

$$y = (0.5 \times -4) - 1$$

5) 
$$\begin{cases} y = -0.25x + 8 \\ y = -2.25x + 0 \end{cases}$$

$$-0.25x + 8 = -2.25x + 0$$

$$2x = -8$$

$$1x = -4$$

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

$$y = (-2.25 \times -4) + 0$$

6) 
$$\begin{cases} y = 0.25x + 7 \\ y = -0.5x + 4 \end{cases}$$

$$0.25x + 7 = -0.5x + 4$$

$$0.75x = -3$$

$$1x = -4$$

$$y = (0.25 \times -4) + 7$$

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

7) 
$$\begin{cases} y = -0.25x - 5 \\ y = -0.75x - 9 \end{cases}$$

$$-0.25x - 5 = -0.75x - 9$$

$$0.5x = -4$$

$$1x = -8$$

$$y = (-0.25 \times -8) - 5$$

$$y = (-0.75 \times -8) - 9$$

8) 
$$\begin{cases} y = 0.7x - 3 \\ y = 0.6x - 2 \end{cases}$$

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

$$0.1x = 1$$

$$1x = 10$$

$$y = (0.7 \times 10) - 3$$

$$y = (0.6 \times 10) - 2$$

9) 
$$\begin{cases} y = 0.25x + 2 \\ y = 0.5x + 1 \end{cases}$$

$$0.25x + 2 = 0.5x + 1$$

$$-0.25x = -1$$

$$1x = 4$$

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

$$y = (0.5 \times 4) + 1$$

10) 
$$\begin{cases} y = -2.5x + 0 \\ y = -0.5x + 8 \end{cases}$$

$$-2.5x + 0 = -0.5x + 8$$

$$-2x = 8$$

$$1x = -4$$

$$y = (-2.5 \times -4) + 0$$

$$y = (-0.5 \times -4) + 8$$

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