



Identifying Point of Intersection with Equations

Name: _____

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

Answers

1)
$$\begin{cases} y = -2.5x - 2 \\ y = -1.25x + 3 \end{cases}$$

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

3)
$$\begin{cases} y = -1.25x + 7 \\ y = -1.5x + 9 \end{cases}$$

4)
$$\begin{cases} y = 0.5x - 3 \\ y = 3.5x - 9 \end{cases}$$

5)
$$\begin{cases} y = -5.5x - 7 \\ y = -1.5x + 1 \end{cases}$$

6)
$$\begin{cases} y = 0.7x - 6 \\ y = -0.5x + 6 \end{cases}$$

7)
$$\begin{cases} y = 0.5x + 0 \\ y = 0.25x - 1 \end{cases}$$

8)
$$\begin{cases} y = -7.5x - 8 \\ y = -6.5x - 6 \end{cases}$$

9)
$$\begin{cases} y = -0.25x - 2 \\ y = 1.5x - 9 \end{cases}$$

10)
$$\begin{cases} y = 0.6x - 6 \\ y = -0.4x + 4 \end{cases}$$

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)
$$\begin{cases} y = -2.5x - 2 \\ y = -1.25x + 3 \end{cases}$$

$$-2.5x - 2 = -1.25x + 3$$

$$-1.25x = 5$$

$$1x = -4$$

$$y = (-2.5 \times -4) - 2$$

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

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

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

$$2.75x = -11$$

$$1x = -4$$

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

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

3)
$$\begin{cases} y = -1.25x + 7 \\ y = -1.5x + 9 \end{cases}$$

$$-1.25x + 7 = -1.5x + 9$$

$$0.25x = 2$$

$$1x = 8$$

$$y = (-1.25 \times 8) + 7$$

$$y = (-1.5 \times 8) + 9$$

4)
$$\begin{cases} y = 0.5x - 3 \\ y = 3.5x - 9 \end{cases}$$

$$0.5x - 3 = 3.5x - 9$$

$$-3x = -6$$

$$1x = 2$$

$$y = (0.5 \times 2) - 3$$

$$y = (3.5 \times 2) - 9$$

5)
$$\begin{cases} y = -5.5x - 7 \\ y = -1.5x + 1 \end{cases}$$

$$-5.5x - 7 = -1.5x + 1$$

$$-4x = 8$$

$$1x = -2$$

$$y = (-5.5 \times -2) - 7$$

$$y = (-1.5 \times -2) + 1$$

6)
$$\begin{cases} y = 0.7x - 6 \\ y = -0.5x + 6 \end{cases}$$

$$0.7x - 6 = -0.5x + 6$$

$$1.2x = 12$$

$$1x = 10$$

$$y = (0.7 \times 10) - 6$$

$$y = (-0.5 \times 10) + 6$$

7)
$$\begin{cases} y = 0.5x + 0 \\ y = 0.25x - 1 \end{cases}$$

$$0.5x + 0 = 0.25x - 1$$

$$0.25x = -1$$

$$1x = -4$$

$$y = (0.5 \times -4) + 0$$

$$y = (0.25 \times -4) - 1$$

8)
$$\begin{cases} y = -7.5x - 8 \\ y = -6.5x - 6 \end{cases}$$

$$-7.5x - 8 = -6.5x - 6$$

$$-1x = 2$$

$$1x = -2$$

$$y = (-7.5 \times -2) - 8$$

$$y = (-6.5 \times -2) - 6$$

9)
$$\begin{cases} y = -0.25x - 2 \\ y = 1.5x - 9 \end{cases}$$

$$-0.25x - 2 = 1.5x - 9$$

$$-1.75x = -7$$

$$1x = 4$$

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

$$y = (1.5 \times 4) - 9$$

10)
$$\begin{cases} y = 0.6x - 6 \\ y = -0.4x + 4 \end{cases}$$

$$0.6x - 6 = -0.4x + 4$$

$$1x = 10$$

$$1x = 10$$

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

$$y = (-0.4 \times 10) + 4$$

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