



Identifying Point of Intersection with Equations

Name: _____

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

Answers

1)
$$\begin{cases} y = 1.25x - 8 \\ y = 0.25x + 0 \end{cases}$$

2)
$$\begin{cases} y = 0.8x + 5 \\ y = 0.2x - 1 \end{cases}$$

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

3)
$$\begin{cases} y = -2.25x - 3 \\ y = -2.5x - 4 \end{cases}$$

4)
$$\begin{cases} y = 5.5x - 1 \\ y = 8.5x - 7 \end{cases}$$

5)
$$\begin{cases} y = -3.75x - 5 \\ y = -1.25x + 5 \end{cases}$$

6)
$$\begin{cases} y = -0.6x + 3 \\ y = 0.2x - 1 \end{cases}$$

7)
$$\begin{cases} y = 0.7x - 5 \\ y = 0.9x - 7 \end{cases}$$

8)
$$\begin{cases} y = -2.25x + 1 \\ y = -4.25x - 7 \end{cases}$$

9)
$$\begin{cases} y = 0.75x + 1 \\ y = 1.75x + 9 \end{cases}$$

10)
$$\begin{cases} y = -1.75x + 8 \\ y = -1.25x + 4 \end{cases}$$



Identifying Point of Intersection with Equations

Name: **Answer Key**

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

Answers

1)
$$\begin{cases} y = 1.25x - 8 \\ y = 0.25x + 0 \end{cases}$$

 $1.25x - 8 = 0.25x + 0$
 $1x = 8$
 $1x = 8$
 $y = (1.25 \times 8) - 8$
 $y = (0.25 \times 8) + 0$

2)
$$\begin{cases} y = 0.8x + 5 \\ y = 0.2x - 1 \end{cases}$$

 $0.8x + 5 = 0.2x - 1$
 $0.6x = -6$
 $1x = -10$
 $y = (0.8 \times -10) + 5$
 $y = (0.2 \times -10) - 1$

3)
$$\begin{cases} y = -2.25x - 3 \\ y = -2.5x - 4 \end{cases}$$

 $-2.25x - 3 = -2.5x - 4$
 $0.25x = -1$
 $1x = -4$
 $y = (-2.25 \times -4) - 3$
 $y = (-2.5 \times -4) - 4$

4)
$$\begin{cases} y = 5.5x - 1 \\ y = 8.5x - 7 \end{cases}$$

 $5.5x - 1 = 8.5x - 7$
 $-3x = -6$
 $1x = 2$
 $y = (5.5 \times 2) - 1$
 $y = (8.5 \times 2) - 7$

5)
$$\begin{cases} y = -3.75x - 5 \\ y = -1.25x + 5 \end{cases}$$

 $-3.75x - 5 = -1.25x + 5$
 $-2.5x = 10$
 $1x = -4$
 $y = (-3.75 \times -4) - 5$
 $y = (-1.25 \times -4) + 5$

6)
$$\begin{cases} y = -0.6x + 3 \\ y = 0.2x - 1 \end{cases}$$

 $-0.6x + 3 = 0.2x - 1$
 $-0.8x = -4$
 $1x = 5$
 $y = (-0.6 \times 5) + 3$
 $y = (0.2 \times 5) - 1$

7)
$$\begin{cases} y = 0.7x - 5 \\ y = 0.9x - 7 \end{cases}$$

 $0.7x - 5 = 0.9x - 7$
 $-0.2x = -2$
 $1x = 10$
 $y = (0.7 \times 10) - 5$
 $y = (0.9 \times 10) - 7$

8)
$$\begin{cases} y = -2.25x + 1 \\ y = -4.25x - 7 \end{cases}$$

 $-2.25x + 1 = -4.25x - 7$
 $2x = -8$
 $1x = -4$
 $y = (-2.25 \times -4) + 1$
 $y = (-4.25 \times -4) - 7$

9)
$$\begin{cases} y = 0.75x + 1 \\ y = 1.75x + 9 \end{cases}$$

 $0.75x + 1 = 1.75x + 9$
 $-1x = 8$
 $1x = -8$
 $y = (0.75 \times -8) + 1$
 $y = (1.75 \times -8) + 9$

10)
$$\begin{cases} y = -1.75x + 8 \\ y = -1.25x + 4 \end{cases}$$

 $-1.75x + 8 = -1.25x + 4$
 $-0.5x = -4$
 $1x = 8$
 $y = (-1.75 \times 8) + 8$
 $y = (-1.25 \times 8) + 4$

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