Identifying Point of Intersection with Equations

Name:

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

1) $\begin{cases} y = 2.25x - 5 \\ y = 0.5x + 2 \end{cases}$

2) $\begin{cases} y = 0.5x - 7 \\ y = -0.5x - 5 \end{cases}$

3) $\begin{cases} y = -2.75x - 6 \\ y = -2.5x - 5 \end{cases}$

4) $\begin{cases} y = 0.5x - 1 \\ y = 0.1x - 5 \end{cases}$

5) $\begin{cases} y = -0.6x - 5 \\ y = -0.4x - 4 \end{cases}$

6) $\begin{cases} y = -7.5x - 8 \\ y = -5.5x - 4 \end{cases}$

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

8) $\begin{cases} y = -1.25x + 2 \\ y = -3.75x - 8 \end{cases}$

9) $\begin{cases} y = -0.4x + 8 \\ y = -0.3x + 7 \end{cases}$

10) $\begin{cases} y = -1.5x + 3 \\ y = 0.25x - 4 \end{cases}$

Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

1-10	90	80	70	60	50	40	30	20	10	0

Identifying Point of Intersection with Equations Name: **Answer Key**

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

1) $\begin{cases} y = 2.25x - 5 \\ y = 0.5x + 2 \end{cases}$

$2.25x - 5 = 0.5x + 2$
$1.75x = 7$
$1x = 4$
$y = (2.25 \times 4) - 5$
$y = (0.5 \times 4) + 2$

2) $\begin{cases} y = 0.5x - 7 \\ y = -0.5x - 5 \end{cases}$

$0.5x - 7 = -0.5x - 5$
$1x = 2$
$1x = 2$
$y = (0.5 \times 2) - 7$
$y = (-0.5 \times 2) - 5$

3) $\begin{cases} y = -2.75x - 6 \\ y = -2.5x - 5 \end{cases}$

$-2.75x - 6 = -2.5x - 5$
$-0.25x = 1$
$1x = -4$
$y = (-2.75 \times -4) - 6$
$y = (-2.5 \times -4) - 5$

4) $\begin{cases} y = 0.5x - 1 \\ y = 0.1x - 5 \end{cases}$

$0.5x - 1 = 0.1x - 5$
$0.4x = -4$
$1x = -10$
$y = (0.5 \times -10) - 1$
$y = (0.1 \times -10) - 5$

5) $\begin{cases} y = -0.6x - 5 \\ y = -0.4x - 4 \end{cases}$

$-0.6x - 5 = -0.4x - 4$
$-0.2x = 1$
$1x = -5$
$y = (-0.6 \times -5) - 5$
$y = (-0.4 \times -5) - 4$

6) $\begin{cases} y = -7.5x - 8 \\ y = -5.5x - 4 \end{cases}$

$-7.5x - 8 = -5.5x - 4$
$-2x = 4$
$1x = -2$
$y = (-7.5 \times -2) - 8$
$y = (-5.5 \times -2) - 4$

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

$4.25x + 8 = 2.75x + 2$
$1.5x = -6$
$1x = -4$
$y = (4.25 \times -4) + 8$
$y = (2.75 \times -4) + 2$

8) $\begin{cases} y = -1.25x + 2 \\ y = -3.75x - 8 \end{cases}$

$-1.25x + 2 = -3.75x - 8$
$2.5x = -10$
$1x = -4$
$y = (-1.25 \times -4) + 2$
$y = (-3.75 \times -4) - 8$

9) $\begin{cases} y = -0.4x + 8 \\ y = -0.3x + 7 \end{cases}$

$-0.4x + 8 = -0.3x + 7$
$-0.1x = -1$
$1x = 10$
$y = (-0.4 \times 10) + 8$
$y = (-0.3 \times 10) + 7$

10) $\begin{cases} y = -1.5x + 3 \\ y = 0.25x - 4 \end{cases}$

$-1.5x + 3 = 0.25x - 4$
$-1.75x = -7$
$1x = 4$
$y = (-1.5 \times 4) + 3$
$y = (0.25 \times 4) - 4$

Answers

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

1-10	90	80	70	60	50	40	30	20	10	0