Identifying Point of Intersection with Equations

Name:

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

1) $\begin{cases} y = 0.75x - 4 \\ y = -2.5x + 9 \end{cases}$

2) $\begin{cases} y = 1.7x + 7 \\ y = 0.1x - 9 \end{cases}$

3) $\begin{cases} y = 4.5x - 3 \\ y = 1.5x + 3 \end{cases}$

4) $\begin{cases} y = 0.1x + 0 \\ y = 0.2x + 1 \end{cases}$

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

6) $\begin{cases} y = 0.9x + 3 \\ y = -0.3x - 9 \end{cases}$

7) $\begin{cases} y = 0.75x + 2 \\ y = 0.5x + 4 \end{cases}$

8) $\begin{cases} y = -2.75x + 7 \\ y = -0.5x - 2 \end{cases}$

9) $\begin{cases} y = 0.25x - 1 \\ y = 2.25x - 9 \end{cases}$

10) $\begin{cases} y = -2.75x - 8 \\ y = -0.25x + 2 \end{cases}$

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) $\begin{cases} y = 0.75x - 4 \\ y = -2.5x + 9 \end{cases}$

$0.75x - 4 = -2.5x + 9$
$3.25x = 13$
$1x = 4$
$y = (0.75 \times 4) - 4$
$y = (-2.5 \times 4) + 9$

2) $\begin{cases} y = 1.7x + 7 \\ y = 0.1x - 9 \end{cases}$

$1.7x + 7 = 0.1x - 9$
$1.6x = -16$
$1x = -10$
$y = (1.7 \times -10) + 7$
$y = (0.1 \times -10) - 9$

3) $\begin{cases} y = 4.5x - 3 \\ y = 1.5x + 3 \end{cases}$

$4.5x - 3 = 1.5x + 3$
$3x = 6$
$1x = 2$
$y = (4.5 \times 2) - 3$
$y = (1.5 \times 2) + 3$

4) $\begin{cases} y = 0.1x + 0 \\ y = 0.2x + 1 \end{cases}$

$0.1x + 0 = 0.2x + 1$
$-0.1x = 1$
$1x = -10$
$y = (0.1 \times -10) + 0$
$y = (0.2 \times -10) + 1$

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

$0.25x - 7 = 0.5x - 6$
$-0.25x = 1$
$1x = -4$
$y = (0.25 \times -4) - 7$
$y = (0.5 \times -4) - 6$

6) $\begin{cases} y = 0.9x + 3 \\ y = -0.3x - 9 \end{cases}$

$0.9x + 3 = -0.3x - 9$
$1.2x = -12$
$1x = -10$
$y = (0.9 \times -10) + 3$
$y = (-0.3 \times -10) - 9$

7) $\begin{cases} y = 0.75x + 2 \\ y = 0.5x + 4 \end{cases}$

$0.75x + 2 = 0.5x + 4$
$0.25x = 2$
$1x = 8$
$y = (0.75 \times 8) + 2$
$y = (0.5 \times 8) + 4$

8) $\begin{cases} y = -2.75x + 7 \\ y = -0.5x - 2 \end{cases}$

$-2.75x + 7 = -0.5x - 2$
$-2.25x = -9$
$1x = 4$
$y = (-2.75 \times 4) + 7$
$y = (-0.5 \times 4) - 2$

9) $\begin{cases} y = 0.25x - 1 \\ y = 2.25x - 9 \end{cases}$

$0.25x - 1 = 2.25x - 9$
$-2x = -8$
$1x = 4$
$y = (0.25 \times 4) - 1$
$y = (2.25 \times 4) - 9$

10) $\begin{cases} y = -2.75x - 8 \\ y = -0.25x + 2 \end{cases}$

$-2.75x - 8 = -0.25x + 2$
$-2.5x = 10$
$1x = -4$
$y = (-2.75 \times -4) - 8$
$y = (-0.25 \times -4) + 2$

Answers

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

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