Identifying Point of Intersection with Equations

Name:

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

1) $\begin{cases} y = 0.25x - 1 \\ y = 0.75x - 3 \end{cases}$

2) $\begin{cases} y = -0.25x - 8 \\ y = -1.25x - 4 \end{cases}$

3) $\begin{cases} y = 2.75x + 6 \\ y = 1.75x + 2 \end{cases}$

4) $\begin{cases} y = 1.5x + 1 \\ y = 2.5x - 5 \end{cases}$

5) $\begin{cases} y = -0.75x + 2 \\ y = -1.75x - 2 \end{cases}$

6) $\begin{cases} y = 0.4x - 2 \\ y = 0.6x - 1 \end{cases}$

7) $\begin{cases} y = -0.75x + 5 \\ y = -2.75x - 3 \end{cases}$

8) $\begin{cases} y = -1.5x - 9 \\ y = 0.25x + 5 \end{cases}$

9) $\begin{cases} y = 2.75x + 1 \\ y = 2.5x + 0 \end{cases}$

10) $\begin{cases} y = -0.5x + 4 \\ y = -3.75x - 9 \end{cases}$

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) $\begin{cases} y = 0.25x - 1 \\ y = 0.75x - 3 \end{cases}$

$0.25x - 1 = 0.75x - 3$
$-0.5x = -2$
$1x = 4$
$y = (0.25 \times 4) - 1$
$y = (0.75 \times 4) - 3$

2) $\begin{cases} y = -0.25x - 8 \\ y = -1.25x - 4 \end{cases}$

$-0.25x - 8 = -1.25x - 4$
$1x = 4$
$1x = 4$
$y = (-0.25 \times 4) - 8$
$y = (-1.25 \times 4) - 4$

3) $\begin{cases} y = 2.75x + 6 \\ y = 1.75x + 2 \end{cases}$

$2.75x + 6 = 1.75x + 2$
$1x = -4$
$1x = -4$
$y = (2.75 \times -4) + 6$
$y = (1.75 \times -4) + 2$

4) $\begin{cases} y = 1.5x + 1 \\ y = 2.5x - 5 \end{cases}$

$1.5x + 1 = 2.5x - 5$
$-1x = -6$
$1x = 6$
$y = (1.5 \times 6) + 1$
$y = (2.5 \times 6) - 5$

5) $\begin{cases} y = -0.75x + 2 \\ y = -1.75x - 2 \end{cases}$

$-0.75x + 2 = -1.75x - 2$
$1x = -4$
$1x = -4$
$y = (-0.75 \times -4) + 2$
$y = (-1.75 \times -4) - 2$

6) $\begin{cases} y = 0.4x - 2 \\ y = 0.6x - 1 \end{cases}$

$0.4x - 2 = 0.6x - 1$
$-0.2x = 1$
$1x = -5$
$y = (0.4 \times -5) - 2$
$y = (0.6 \times -5) - 1$

7) $\begin{cases} y = -0.75x + 5 \\ y = -2.75x - 3 \end{cases}$

$-0.75x + 5 = -2.75x - 3$
$2x = -8$
$1x = -4$
$y = (-0.75 \times -4) + 5$
$y = (-2.75 \times -4) - 3$

8) $\begin{cases} y = -1.5x - 9 \\ y = 0.25x + 5 \end{cases}$

$-1.5x - 9 = 0.25x + 5$
$-1.75x = 14$
$1x = -8$
$y = (-1.5 \times -8) - 9$
$y = (0.25 \times -8) + 5$

9) $\begin{cases} y = 2.75x + 1 \\ y = 2.5x + 0 \end{cases}$

$2.75x + 1 = 2.5x + 0$
$0.25x = -1$
$1x = -4$
$y = (2.75 \times -4) + 1$
$y = (2.5 \times -4) + 0$

10) $\begin{cases} y = -0.5x + 4 \\ y = -3.75x - 9 \end{cases}$

$-0.5x + 4 = -3.75x - 9$
$3.25x = -13$
$1x = -4$
$y = (-0.5 \times -4) + 4$
$y = (-3.75 \times -4) - 9$

Answers

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

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