Identifying Point of Intersection with Equations

Name:

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

1) $\begin{cases} y = 0.25x - 8 \\ y = 1.75x - 2 \end{cases}$

2) $\begin{cases} y = -1.5x + 7 \\ y = 0.25x - 7 \end{cases}$

3) $\begin{cases} y = -0.75x + 4 \\ y = 0.25x - 4 \end{cases}$

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

5) $\begin{cases} y = 0.75x + 2 \\ y = -0.25x + 6 \end{cases}$

6) $\begin{cases} y = 0.3x + 4 \\ y = 0.1x + 2 \end{cases}$

7) $\begin{cases} y = -2.5x + 3 \\ y = -8.5x - 9 \end{cases}$

8) $\begin{cases} y = -0.1x - 8 \\ y = -0.5x - 4 \end{cases}$

9) $\begin{cases} y = 0.4x + 3 \\ y = -0.2x - 3 \end{cases}$

10) $\begin{cases} y = -0.4x - 3 \\ y = -0.2x - 4 \end{cases}$

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) $\begin{cases} y = 0.25x - 8 \\ y = 1.75x - 2 \end{cases}$

$0.25x - 8 = 1.75x - 2$
$-1.5x = 6$
$1x = -4$
$y = (0.25 \times -4) - 8$
$y = (1.75 \times -4) - 2$

2) $\begin{cases} y = -1.5x + 7 \\ y = 0.25x - 7 \end{cases}$

$-1.5x + 7 = 0.25x - 7$
$-1.75x = -14$
$1x = 8$
$y = (-1.5 \times 8) + 7$
$y = (0.25 \times 8) - 7$

3) $\begin{cases} y = -0.75x + 4 \\ y = 0.25x - 4 \end{cases}$

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

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

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

5) $\begin{cases} y = 0.75x + 2 \\ y = -0.25x + 6 \end{cases}$

$0.75x + 2 = -0.25x + 6$
$1x = 4$
$1x = 4$
$y = (0.75 \times 4) + 2$
$y = (-0.25 \times 4) + 6$

6) $\begin{cases} y = 0.3x + 4 \\ y = 0.1x + 2 \end{cases}$

$0.3x + 4 = 0.1x + 2$
$0.2x = -2$
$1x = -10$
$y = (0.3 \times -10) + 4$
$y = (0.1 \times -10) + 2$

7) $\begin{cases} y = -2.5x + 3 \\ y = -8.5x - 9 \end{cases}$

$-2.5x + 3 = -8.5x - 9$
$6x = -12$
$1x = -2$
$y = (-2.5 \times -2) + 3$
$y = (-8.5 \times -2) - 9$

8) $\begin{cases} y = -0.1x - 8 \\ y = -0.5x - 4 \end{cases}$

$-0.1x - 8 = -0.5x - 4$
$0.4x = 4$
$1x = 10$
$y = (-0.1 \times 10) - 8$
$y = (-0.5 \times 10) - 4$

9) $\begin{cases} y = 0.4x + 3 \\ y = -0.2x - 3 \end{cases}$

$0.4x + 3 = -0.2x - 3$
$0.6x = -6$
$1x = -10$
$y = (0.4 \times -10) + 3$
$y = (-0.2 \times -10) - 3$

10) $\begin{cases} y = -0.4x - 3 \\ y = -0.2x - 4 \end{cases}$

$-0.4x - 3 = -0.2x - 4$
$-0.2x = -1$
$1x = 5$
$y = (-0.4 \times 5) - 3$
$y = (-0.2 \times 5) - 4$

Answers

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

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