Identifying Point of Intersection with Equations Name:

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

1) $\begin{cases} y = 0.75x - 4 \\ y = 1.25x + 0 \end{cases}$

2) $\begin{cases} y = 0.25x + 6 \\ y = 0.5x + 7 \end{cases}$

3) $\begin{cases} y = -0.1x + 2 \\ y = -0.6x - 3 \end{cases}$

4) $\begin{cases} y = 1.5x - 1 \\ y = 0.5x - 3 \end{cases}$

5) $\begin{cases} y = 1.75x + 2 \\ y = 1.25x + 4 \end{cases}$

6) $\begin{cases} y = -2.75x + 9 \\ y = -1.25x + 3 \end{cases}$

7) $\begin{cases} y = -3.5x - 1 \\ y = 0.5x + 7 \end{cases}$

8) $\begin{cases} y = -0.1x - 8 \\ y = -0.4x - 5 \end{cases}$

9) $\begin{cases} y = 1.5x - 1 \\ y = 2.75x - 6 \end{cases}$

10) $\begin{cases} y = -0.75x + 4 \\ y = -2.5x - 3 \end{cases}$

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) $\begin{cases} y = 0.75x - 4 \\ y = 1.25x + 0 \end{cases}$

$0.75x - 4 = 1.25x + 0$
$-0.5x = 4$
$1x = -8$
$y = (0.75 \times -8) - 4$
$y = (1.25 \times -8) + 0$

2) $\begin{cases} y = 0.25x + 6 \\ y = 0.5x + 7 \end{cases}$

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

3) $\begin{cases} y = -0.1x + 2 \\ y = -0.6x - 3 \end{cases}$

$-0.1x + 2 = -0.6x - 3$
$0.5x = -5$
$1x = -10$
$y = (-0.1 \times -10) + 2$
$y = (-0.6 \times -10) - 3$

4) $\begin{cases} y = 1.5x - 1 \\ y = 0.5x - 3 \end{cases}$

$1.5x - 1 = 0.5x - 3$
$1x = -2$
$1x = -2$
$y = (1.5 \times -2) - 1$
$y = (0.5 \times -2) - 3$

5) $\begin{cases} y = 1.75x + 2 \\ y = 1.25x + 4 \end{cases}$

$1.75x + 2 = 1.25x + 4$
$0.5x = 2$
$1x = 4$
$y = (1.75 \times 4) + 2$
$y = (1.25 \times 4) + 4$

6) $\begin{cases} y = -2.75x + 9 \\ y = -1.25x + 3 \end{cases}$

$-2.75x + 9 = -1.25x + 3$
$-1.5x = -6$
$1x = 4$
$y = (-2.75 \times 4) + 9$
$y = (-1.25 \times 4) + 3$

7) $\begin{cases} y = -3.5x - 1 \\ y = 0.5x + 7 \end{cases}$

$-3.5x - 1 = 0.5x + 7$
$-4x = 8$
$1x = -2$
$y = (-3.5 \times -2) - 1$
$y = (0.5 \times -2) + 7$

8) $\begin{cases} y = -0.1x - 8 \\ y = -0.4x - 5 \end{cases}$

$-0.1x - 8 = -0.4x - 5$
$0.3x = 3$
$1x = 10$
$y = (-0.1 \times 10) - 8$
$y = (-0.4 \times 10) - 5$

9) $\begin{cases} y = 1.5x - 1 \\ y = 2.75x - 6 \end{cases}$

$1.5x - 1 = 2.75x - 6$
$-1.25x = -5$
$1x = 4$
$y = (1.5 \times 4) - 1$
$y = (2.75 \times 4) - 6$

10) $\begin{cases} y = -0.75x + 4 \\ y = -2.5x - 3 \end{cases}$

$-0.75x + 4 = -2.5x - 3$
$1.75x = -7$
$1x = -4$
$y = (-0.75 \times -4) + 4$
$y = (-2.5 \times -4) - 3$

Answers

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

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