Identifying Point of Intersection with Equations

Name:

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

1) $\begin{cases} y = -1.2x - 6 \\ y = -0.5x + 1 \end{cases}$

2) $\begin{cases} y = 0.4x + 0 \\ y = -0.4x + 8 \end{cases}$

3) $\begin{cases} y = -0.25x - 5 \\ y = -1.5x + 0 \end{cases}$

4) $\begin{cases} y = 8.5x - 7 \\ y = 6.5x - 3 \end{cases}$

5) $\begin{cases} y = -5.5x - 7 \\ y = 2.5x + 9 \end{cases}$

6) $\begin{cases} y = 1.5x - 6 \\ y = 6.5x + 4 \end{cases}$

7) $\begin{cases} y = -0.6x - 8 \\ y = -0.2x - 6 \end{cases}$

8) $\begin{cases} y = -1.5x + 4 \\ y = -3.75x - 5 \end{cases}$

9) $\begin{cases} y = -1.75x - 6 \\ y = -1.5x - 5 \end{cases}$

10) $\begin{cases} y = -1.5x + 4 \\ y = 0.75x - 5 \end{cases}$

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) $\begin{cases} y = -1.2x - 6 \\ y = -0.5x + 1 \end{cases}$

$-1.2x - 6 = -0.5x + 1$
$-0.7x = 7$
$1x = -10$
$y = (-1.2 \times -10) - 6$
$y = (-0.5 \times -10) + 1$

2) $\begin{cases} y = 0.4x + 0 \\ y = -0.4x + 8 \end{cases}$

$0.4x + 0 = -0.4x + 8$
$0.8x = 8$
$1x = 10$
$y = (0.4 \times 10) + 0$
$y = (-0.4 \times 10) + 8$

3) $\begin{cases} y = -0.25x - 5 \\ y = -1.5x + 0 \end{cases}$

$-0.25x - 5 = -1.5x + 0$
$1.25x = 5$
$1x = 4$
$y = (-0.25 \times 4) - 5$
$y = (-1.5 \times 4) + 0$

4) $\begin{cases} y = 8.5x - 7 \\ y = 6.5x - 3 \end{cases}$

$8.5x - 7 = 6.5x - 3$
$2x = 4$
$1x = 2$
$y = (8.5 \times 2) - 7$
$y = (6.5 \times 2) - 3$

5) $\begin{cases} y = -5.5x - 7 \\ y = 2.5x + 9 \end{cases}$

$-5.5x - 7 = 2.5x + 9$
$-8x = 16$
$1x = -2$
$y = (-5.5 \times -2) - 7$
$y = (2.5 \times -2) + 9$

6) $\begin{cases} y = 1.5x - 6 \\ y = 6.5x + 4 \end{cases}$

$1.5x - 6 = 6.5x + 4$
$-5x = 10$
$1x = -2$
$y = (1.5 \times -2) - 6$
$y = (6.5 \times -2) + 4$

7) $\begin{cases} y = -0.6x - 8 \\ y = -0.2x - 6 \end{cases}$

$-0.6x - 8 = -0.2x - 6$
$-0.4x = 2$
$1x = -5$
$y = (-0.6 \times -5) - 8$
$y = (-0.2 \times -5) - 6$

8) $\begin{cases} y = -1.5x + 4 \\ y = -3.75x - 5 \end{cases}$

$-1.5x + 4 = -3.75x - 5$
$2.25x = -9$
$1x = -4$
$y = (-1.5 \times -4) + 4$
$y = (-3.75 \times -4) - 5$

9) $\begin{cases} y = -1.75x - 6 \\ y = -1.5x - 5 \end{cases}$

$-1.75x - 6 = -1.5x - 5$
$-0.25x = 1$
$1x = -4$
$y = (-1.75 \times -4) - 6$
$y = (-1.5 \times -4) - 5$

10) $\begin{cases} y = -1.5x + 4 \\ y = 0.75x - 5 \end{cases}$

$-1.5x + 4 = 0.75x - 5$
$-2.25x = -9$
$1x = 4$
$y = (-1.5 \times 4) + 4$
$y = (0.75 \times 4) - 5$

Answers

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

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