Identifying Point of Intersection with Equations

Name:

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

1) $\begin{cases} y = 0.25x + 5 \\ y = -0.75x + 9 \end{cases}$

2) $\begin{cases} y = 1.25x + 0 \\ y = 0.5x - 6 \end{cases}$

3) $\begin{cases} y = -0.75x - 2 \\ y = -3.5x + 9 \end{cases}$

4) $\begin{cases} y = 3.25x - 6 \\ y = 1.25x + 2 \end{cases}$

5) $\begin{cases} y = -0.3x + 6 \\ y = -0.5x + 4 \end{cases}$

6) $\begin{cases} y = 1.5x - 9 \\ y = -1.25x + 2 \end{cases}$

7) $\begin{cases} y = 0.2x - 4 \\ y = -0.2x - 8 \end{cases}$

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

9) $\begin{cases} y = 1.5x - 6 \\ y = 0.4x + 5 \end{cases}$

10) $\begin{cases} y = 0.1x + 0 \\ y = 0.3x - 2 \end{cases}$

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) $\begin{cases} y = 0.25x + 5 \\ y = -0.75x + 9 \end{cases}$

$0.25x+5 = -0.75x+9$
$1x = 4$
$1x = 4$
$y = (0.25\times4)+5$
$y = (-0.75\times4)+9$

2) $\begin{cases} y = 1.25x + 0 \\ y = 0.5x - 6 \end{cases}$

$1.25x+0 = 0.5x- 6$
$0.75x = -6$
$1x = -8$
$y = (1.25\times-8)+0$
$y = (0.5\times-8)- 6$

3) $\begin{cases} y = -0.75x - 2 \\ y = -3.5x + 9 \end{cases}$

$-0.75x- 2 = -3.5x+9$
$2.75x = 11$
$1x = 4$
$y = (-0.75\times4)- 2$
$y = (-3.5\times4)+9$

4) $\begin{cases} y = 3.25x - 6 \\ y = 1.25x + 2 \end{cases}$

$3.25x- 6 = 1.25x+2$
$2x = 8$
$1x = 4$
$y = (3.25\times4)- 6$
$y = (1.25\times4)+2$

5) $\begin{cases} y = -0.3x + 6 \\ y = -0.5x + 4 \end{cases}$

$-0.3x+6 = -0.5x+4$
$0.2x = -2$
$1x = -10$
$y = (-0.3\times-10)+6$
$y = (-0.5\times-10)+4$

6) $\begin{cases} y = 1.5x - 9 \\ y = -1.25x + 2 \end{cases}$

$1.5x- 9 = -1.25x+2$
$2.75x = 11$
$1x = 4$
$y = (1.5\times4)- 9$
$y = (-1.25\times4)+2$

7) $\begin{cases} y = 0.2x - 4 \\ y = -0.2x - 8 \end{cases}$

$0.2x- 4 = -0.2x- 8$
$0.4x = -4$
$1x = -10$
$y = (0.2\times-10)- 4$
$y = (-0.2\times-10)- 8$

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

$-0.25x- 5 = -0.5x- 7$
$0.25x = -2$
$1x = -8$
$y = (-0.25\times-8)- 5$
$y = (-0.5\times-8)- 7$

9) $\begin{cases} y = 1.5x - 6 \\ y = 0.4x + 5 \end{cases}$

$1.5x- 6 = 0.4x+5$
$1.1x = 11$
$1x = 10$
$y = (1.5\times10)- 6$
$y = (0.4\times10)+5$

10) $\begin{cases} y = 0.1x + 0 \\ y = 0.3x - 2 \end{cases}$

$0.1x+0 = 0.3x- 2$
$-0.2x = -2$
$1x = 10$
$y = (0.1\times10)+0$
$y = (0.3\times10)- 2$

Answers

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

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