Identifying Point of Intersection with Equations

Name:

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

1) $\begin{cases} y = 0.5x + 7 \\ y = -0.25x + 4 \end{cases}$

2) $\begin{cases} y = -0.5x + 1 \\ y = 2.5x + 7 \end{cases}$

3) $\begin{cases} y = 1.25x + 3 \\ y = 0.25x - 1 \end{cases}$

4) $\begin{cases} y = 4.5x - 6 \\ y = 0.5x + 2 \end{cases}$

5) $\begin{cases} y = -0.75x - 5 \\ y = -1.5x - 8 \end{cases}$

6) $\begin{cases} y = -9.5x - 9 \\ y = -1.5x + 7 \end{cases}$

7) $\begin{cases} y = -0.1x - 7 \\ y = 0.3x - 3 \end{cases}$

8) $\begin{cases} y = 0.25x + 8 \\ y = 2.25x - 8 \end{cases}$

9) $\begin{cases} y = -0.6x + 2 \\ y = 0.4x - 3 \end{cases}$

10) $\begin{cases} y = 4.75x + 9 \\ y = 2.5x + 0 \end{cases}$

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) $\begin{cases} y = 0.5x + 7 \\ y = -0.25x + 4 \end{cases}$

$0.5x+7 = -0.25x+4$
$0.75x = -3$
$1x = -4$
$y = (0.5\times-4)+7$
$y = (-0.25\times-4)+4$

2) $\begin{cases} y = -0.5x + 1 \\ y = 2.5x + 7 \end{cases}$

$-0.5x+1 = 2.5x+7$
$-3x = 6$
$1x = -2$
$y = (-0.5\times-2)+1$
$y = (2.5\times-2)+7$

3) $\begin{cases} y = 1.25x + 3 \\ y = 0.25x - 1 \end{cases}$

$1.25x+3 = 0.25x- 1$
$1x = -4$
$1x = -4$
$y = (1.25\times-4)+3$
$y = (0.25\times-4)- 1$

4) $\begin{cases} y = 4.5x - 6 \\ y = 0.5x + 2 \end{cases}$

$4.5x- 6 = 0.5x+2$
$4x = 8$
$1x = 2$
$y = (4.5\times2)- 6$
$y = (0.5\times2)+2$

5) $\begin{cases} y = -0.75x - 5 \\ y = -1.5x - 8 \end{cases}$

$-0.75x- 5 = -1.5x- 8$
$0.75x = -3$
$1x = -4$
$y = (-0.75\times-4)- 5$
$y = (-1.5\times-4)- 8$

6) $\begin{cases} y = -9.5x - 9 \\ y = -1.5x + 7 \end{cases}$

$-9.5x- 9 = -1.5x+7$
$-8x = 16$
$1x = -2$
$y = (-9.5\times-2)- 9$
$y = (-1.5\times-2)+7$

7) $\begin{cases} y = -0.1x - 7 \\ y = 0.3x - 3 \end{cases}$

$-0.1x- 7 = 0.3x- 3$
$-0.4x = 4$
$1x = -10$
$y = (-0.1\times-10)- 7$
$y = (0.3\times-10)- 3$

8) $\begin{cases} y = 0.25x + 8 \\ y = 2.25x - 8 \end{cases}$

$0.25x+8 = 2.25x- 8$
$-2x = -16$
$1x = 8$
$y = (0.25\times8)+8$
$y = (2.25\times8)- 8$

9) $\begin{cases} y = -0.6x + 2 \\ y = 0.4x - 3 \end{cases}$

$-0.6x+2 = 0.4x- 3$
$-1x = -5$
$1x = 5$
$y = (-0.6\times5)+2$
$y = (0.4\times5)- 3$

10) $\begin{cases} y = 4.75x + 9 \\ y = 2.5x + 0 \end{cases}$

$4.75x+9 = 2.5x+0$
$2.25x = -9$
$1x = -4$
$y = (4.75\times-4)+9$
$y = (2.5\times-4)+0$

Answers

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

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