Identifying Point of Intersection with Equations

Name:

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

1) $\begin{cases} y = 1.25x + 2 \\ y = -0.25x + 8 \end{cases}$

2) $\begin{cases} y = 0.2x + 2 \\ y = -0.5x + 9 \end{cases}$

3) $\begin{cases} y = -0.75x + 9 \\ y = 2.25x - 3 \end{cases}$

4) $\begin{cases} y = 0.9x + 4 \\ y = -0.3x - 8 \end{cases}$

5) $\begin{cases} y = 0.3x - 2 \\ y = -0.3x - 8 \end{cases}$

6) $\begin{cases} y = -0.5x - 8 \\ y = 0.3x + 0 \end{cases}$

7) $\begin{cases} y = 2.5x - 4 \\ y = 4.5x + 0 \end{cases}$

8) $\begin{cases} y = -1.5x - 7 \\ y = 2.5x + 1 \end{cases}$

9) $\begin{cases} y = -3.25x - 8 \\ y = 0.75x + 8 \end{cases}$

10) $\begin{cases} y = 0.3x + 5 \\ y = 0.8x + 0 \end{cases}$

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) $\begin{cases} y = 1.25x + 2 \\ y = -0.25x + 8 \end{cases}$

$1.25x+2 = -0.25x+8$
$1.5x = 6$
$1x = 4$
$y = (1.25\times4)+2$
$y = (-0.25\times4)+8$

2) $\begin{cases} y = 0.2x + 2 \\ y = -0.5x + 9 \end{cases}$

$0.2x+2 = -0.5x+9$
$0.7x = 7$
$1x = 10$
$y = (0.2\times10)+2$
$y = (-0.5\times10)+9$

3) $\begin{cases} y = -0.75x + 9 \\ y = 2.25x - 3 \end{cases}$

$-0.75x+9 = 2.25x- 3$
$-3x = -12$
$1x = 4$
$y = (-0.75\times4)+9$
$y = (2.25\times4)- 3$

4) $\begin{cases} y = 0.9x + 4 \\ y = -0.3x - 8 \end{cases}$

$0.9x+4 = -0.3x- 8$
$1.2x = -12$
$1x = -10$
$y = (0.9\times-10)+4$
$y = (-0.3\times-10)- 8$

5) $\begin{cases} y = 0.3x - 2 \\ y = -0.3x - 8 \end{cases}$

$0.3x- 2 = -0.3x- 8$
$0.6x = -6$
$1x = -10$
$y = (0.3\times-10)- 2$
$y = (-0.3\times-10)- 8$

6) $\begin{cases} y = -0.5x - 8 \\ y = 0.3x + 0 \end{cases}$

$-0.5x- 8 = 0.3x+0$
$-0.8x = 8$
$1x = -10$
$y = (-0.5\times-10)- 8$
$y = (0.3\times-10)+0$

7) $\begin{cases} y = 2.5x - 4 \\ y = 4.5x + 0 \end{cases}$

$2.5x- 4 = 4.5x+0$
$-2x = 4$
$1x = -2$
$y = (2.5\times-2)- 4$
$y = (4.5\times-2)+0$

8) $\begin{cases} y = -1.5x - 7 \\ y = 2.5x + 1 \end{cases}$

$-1.5x- 7 = 2.5x+1$
$-4x = 8$
$1x = -2$
$y = (-1.5\times-2)- 7$
$y = (2.5\times-2)+1$

9) $\begin{cases} y = -3.25x - 8 \\ y = 0.75x + 8 \end{cases}$

$-3.25x- 8 = 0.75x+8$
$-4x = 16$
$1x = -4$
$y = (-3.25\times-4)- 8$
$y = (0.75\times-4)+8$

10) $\begin{cases} y = 0.3x + 5 \\ y = 0.8x + 0 \end{cases}$

$0.3x+5 = 0.8x+0$
$-0.5x = -5$
$1x = 10$
$y = (0.3\times10)+5$
$y = (0.8\times10)+0$

Answers

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

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