Identifying Point of Intersection with Equations

Name:

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

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

2) $\begin{cases} y = 2.5x - 7 \\ y = -1.25x + 8 \end{cases}$

3) $\begin{cases} y = 0.25x - 5 \\ y = 3.5x + 8 \end{cases}$

4) $\begin{cases} y = 0.7x + 6 \\ y = 0.9x + 8 \end{cases}$

5) $\begin{cases} y = -4.5x + 9 \\ y = 1.5x - 3 \end{cases}$

6) $\begin{cases} y = -0.75x - 1 \\ y = -0.5x - 2 \end{cases}$

7) $\begin{cases} y = -1.2x - 3 \\ y = 0.8x + 7 \end{cases}$

8) $\begin{cases} y = -1.25x - 8 \\ y = -0.75x - 4 \end{cases}$

9) $\begin{cases} y = 0.2x - 3 \\ y = -0.2x - 5 \end{cases}$

10) $\begin{cases} y = 1.5x + 1 \\ y = 2.75x - 4 \end{cases}$

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

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

2) $\begin{cases} y = 2.5x - 7 \\ y = -1.25x + 8 \end{cases}$

$2.5x- 7 = -1.25x+8$
$3.75x = 15$
$1x = 4$
$y = (2.5\times4)- 7$
$y = (-1.25\times4)+8$

3) $\begin{cases} y = 0.25x - 5 \\ y = 3.5x + 8 \end{cases}$

$0.25x- 5 = 3.5x+8$
$-3.25x = 13$
$1x = -4$
$y = (0.25\times-4)- 5$
$y = (3.5\times-4)+8$

4) $\begin{cases} y = 0.7x + 6 \\ y = 0.9x + 8 \end{cases}$

$0.7x+6 = 0.9x+8$
$-0.2x = 2$
$1x = -10$
$y = (0.7\times-10)+6$
$y = (0.9\times-10)+8$

5) $\begin{cases} y = -4.5x + 9 \\ y = 1.5x - 3 \end{cases}$

$-4.5x+9 = 1.5x- 3$
$-6x = -12$
$1x = 2$
$y = (-4.5\times2)+9$
$y = (1.5\times2)- 3$

6) $\begin{cases} y = -0.75x - 1 \\ y = -0.5x - 2 \end{cases}$

$-0.75x- 1 = -0.5x- 2$
$-0.25x = -1$
$1x = 4$
$y = (-0.75\times4)- 1$
$y = (-0.5\times4)- 2$

7) $\begin{cases} y = -1.2x - 3 \\ y = 0.8x + 7 \end{cases}$

$-1.2x- 3 = 0.8x+7$
$-2x = 10$
$1x = -5$
$y = (-1.2\times-5)- 3$
$y = (0.8\times-5)+7$

8) $\begin{cases} y = -1.25x - 8 \\ y = -0.75x - 4 \end{cases}$

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

9) $\begin{cases} y = 0.2x - 3 \\ y = -0.2x - 5 \end{cases}$

$0.2x- 3 = -0.2x- 5$
$0.4x = -2$
$1x = -5$
$y = (0.2\times-5)- 3$
$y = (-0.2\times-5)- 5$

10) $\begin{cases} y = 1.5x + 1 \\ y = 2.75x - 4 \end{cases}$

$1.5x+1 = 2.75x- 4$
$-1.25x = -5$
$1x = 4$
$y = (1.5\times4)+1$
$y = (2.75\times4)- 4$

Answers

1. **(-4 , 2)**
2. **(4 , 3)**
3. **(-4 , -6)**
4. **(-10 , -1)**
5. **(2 , 0)**
6. **(4 , -4)**
7. **(-5 , 3)**
8. **(-8 , 2)**
9. **(-5 , -4)**
10. **(4 , 7)**

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