Identifying Point of Intersection with Equations

Name:

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

1) $\begin{cases} y = -2.5x + 3 \\ y = -5.5x - 3 \end{cases}$

2) $\begin{cases} y = 0.4x - 2 \\ y = 0.5x - 1 \end{cases}$

3) $\begin{cases} y = 0.5x + 9 \\ y = -0.5x + 3 \end{cases}$

4) $\begin{cases} y = -0.4x + 7 \\ y = -0.6x + 8 \end{cases}$

5) $\begin{cases} y = 6.5x + 7 \\ y = 4.5x + 3 \end{cases}$

6) $\begin{cases} y = -7.5x + 5 \\ y = -6.5x + 3 \end{cases}$

7) $\begin{cases} y = 3.5x - 2 \\ y = 2.5x + 0 \end{cases}$

8) $\begin{cases} y = 3.25x + 8 \\ y = 1.75x + 2 \end{cases}$

9) $\begin{cases} y = -1.2x - 9 \\ y = 0.1x + 4 \end{cases}$

10) $\begin{cases} y = -0.5x + 2 \\ y = -1.75x + 7 \end{cases}$

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) $\begin{cases} y = -2.5x + 3 \\ y = -5.5x - 3 \end{cases}$

$-2.5x+3 = -5.5x- 3$
$3x = -6$
$1x = -2$
$y = (-2.5\times-2)+3$
$y = (-5.5\times-2)- 3$

2) $\begin{cases} y = 0.4x - 2 \\ y = 0.5x - 1 \end{cases}$

$0.4x- 2 = 0.5x- 1$
$-0.1x = 1$
$1x = -10$
$y = (0.4\times-10)- 2$
$y = (0.5\times-10)- 1$

3) $\begin{cases} y = 0.5x + 9 \\ y = -0.5x + 3 \end{cases}$

$0.5x+9 = -0.5x+3$
$1x = -6$
$1x = -6$
$y = (0.5\times-6)+9$
$y = (-0.5\times-6)+3$

4) $\begin{cases} y = -0.4x + 7 \\ y = -0.6x + 8 \end{cases}$

$-0.4x+7 = -0.6x+8$
$0.2x = 1$
$1x = 5$
$y = (-0.4\times5)+7$
$y = (-0.6\times5)+8$

5) $\begin{cases} y = 6.5x + 7 \\ y = 4.5x + 3 \end{cases}$

$6.5x+7 = 4.5x+3$
$2x = -4$
$1x = -2$
$y = (6.5\times-2)+7$
$y = (4.5\times-2)+3$

6) $\begin{cases} y = -7.5x + 5 \\ y = -6.5x + 3 \end{cases}$

$-7.5x+5 = -6.5x+3$
$-1x = -2$
$1x = 2$
$y = (-7.5\times2)+5$
$y = (-6.5\times2)+3$

7) $\begin{cases} y = 3.5x - 2 \\ y = 2.5x + 0 \end{cases}$

$3.5x- 2 = 2.5x+0$
$1x = 2$
$1x = 2$
$y = (3.5\times2)- 2$
$y = (2.5\times2)+0$

8) $\begin{cases} y = 3.25x + 8 \\ y = 1.75x + 2 \end{cases}$

$3.25x+8 = 1.75x+2$
$1.5x = -6$
$1x = -4$
$y = (3.25\times-4)+8$
$y = (1.75\times-4)+2$

9) $\begin{cases} y = -1.2x - 9 \\ y = 0.1x + 4 \end{cases}$

$-1.2x- 9 = 0.1x+4$
$-1.3x = 13$
$1x = -10$
$y = (-1.2\times-10)- 9$
$y = (0.1\times-10)+4$

10) $\begin{cases} y = -0.5x + 2 \\ y = -1.75x + 7 \end{cases}$

$-0.5x+2 = -1.75x+7$
$1.25x = 5$
$1x = 4$
$y = (-0.5\times4)+2$
$y = (-1.75\times4)+7$

Answers

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

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