Identifying Point of Intersection with Equations

Name:

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

1) $\begin{cases} y = 0.5x + 7 \\ y = 2.75x - 2 \end{cases}$

2) $\begin{cases} y = 0.8x + 4 \\ y = -0.2x - 6 \end{cases}$

3) $\begin{cases} y = -1.5x - 6 \\ y = 0.5x + 2 \end{cases}$

4) $\begin{cases} y = -1.2x + 8 \\ y = 0.5x - 9 \end{cases}$

5) $\begin{cases} y = 0.5x - 7 \\ y = -3.5x + 1 \end{cases}$

6) $\begin{cases} y = 3.5x + 3 \\ y = 2.5x + 5 \end{cases}$

7) $\begin{cases} y = 2.25x + 5 \\ y = 2.5x + 6 \end{cases}$

8) $\begin{cases} y = 1.25x - 9 \\ y = -0.5x - 2 \end{cases}$

9) $\begin{cases} y = -1.25x + 3 \\ y = 0.25x - 9 \end{cases}$

10) $\begin{cases} y = 1.5x + 5 \\ y = 4.5x - 1 \end{cases}$

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) $\begin{cases} y = 0.5x + 7 \\ y = 2.75x - 2 \end{cases}$

$0.5x+7 = 2.75x- 2$
$-2.25x = -9$
$1x = 4$
$y = (0.5\times4)+7$
$y = (2.75\times4)- 2$

2) $\begin{cases} y = 0.8x + 4 \\ y = -0.2x - 6 \end{cases}$

$0.8x+4 = -0.2x- 6$
$1x = -10$
$1x = -10$
$y = (0.8\times-10)+4$
$y = (-0.2\times-10)- 6$

3) $\begin{cases} y = -1.5x - 6 \\ y = 0.5x + 2 \end{cases}$

$-1.5x- 6 = 0.5x+2$
$-2x = 8$
$1x = -4$
$y = (-1.5\times-4)- 6$
$y = (0.5\times-4)+2$

4) $\begin{cases} y = -1.2x + 8 \\ y = 0.5x - 9 \end{cases}$

$-1.2x+8 = 0.5x- 9$
$-1.7x = -17$
$1x = 10$
$y = (-1.2\times10)+8$
$y = (0.5\times10)- 9$

5) $\begin{cases} y = 0.5x - 7 \\ y = -3.5x + 1 \end{cases}$

$0.5x- 7 = -3.5x+1$
$4x = 8$
$1x = 2$
$y = (0.5\times2)- 7$
$y = (-3.5\times2)+1$

6) $\begin{cases} y = 3.5x + 3 \\ y = 2.5x + 5 \end{cases}$

$3.5x+3 = 2.5x+5$
$1x = 2$
$1x = 2$
$y = (3.5\times2)+3$
$y = (2.5\times2)+5$

7) $\begin{cases} y = 2.25x + 5 \\ y = 2.5x + 6 \end{cases}$

$2.25x+5 = 2.5x+6$
$-0.25x = 1$
$1x = -4$
$y = (2.25\times-4)+5$
$y = (2.5\times-4)+6$

8) $\begin{cases} y = 1.25x - 9 \\ y = -0.5x - 2 \end{cases}$

$1.25x- 9 = -0.5x- 2$
$1.75x = 7$
$1x = 4$
$y = (1.25\times4)- 9$
$y = (-0.5\times4)- 2$

9) $\begin{cases} y = -1.25x + 3 \\ y = 0.25x - 9 \end{cases}$

$-1.25x+3 = 0.25x- 9$
$-1.5x = -12$
$1x = 8$
$y = (-1.25\times8)+3$
$y = (0.25\times8)- 9$

10) $\begin{cases} y = 1.5x + 5 \\ y = 4.5x - 1 \end{cases}$

$1.5x+5 = 4.5x- 1$
$-3x = -6$
$1x = 2$
$y = (1.5\times2)+5$
$y = (4.5\times2)- 1$

Answers

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

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