Identifying Point of Intersection with Equations

Name:

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

1) $\begin{cases} y = -3.25x - 9 \\ y = -2.75x - 7 \end{cases}$

2) $\begin{cases} y = 0.75x + 6 \\ y = 0.25x + 4 \end{cases}$

3) $\begin{cases} y = 4.25x - 7 \\ y = 1.5x + 4 \end{cases}$

4) $\begin{cases} y = 0.9x + 3 \\ y = 0.1x - 5 \end{cases}$

5) $\begin{cases} y = 0.75x - 4 \\ y = 2.75x + 4 \end{cases}$

6) $\begin{cases} y = 0.3x + 0 \\ y = 0.7x - 4 \end{cases}$

7) $\begin{cases} y = 0.75x - 2 \\ y = 3.5x + 9 \end{cases}$

8) $\begin{cases} y = -0.5x + 3 \\ y = -1.25x + 6 \end{cases}$

9) $\begin{cases} y = 1.8x + 8 \\ y = -0.6x - 4 \end{cases}$

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

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) $\begin{cases} y = -3.25x - 9 \\ y = -2.75x - 7 \end{cases}$

$-3.25x - 9 = -2.75x - 7$
$-0.5x = 2$
$1x = -4$
$y = (-3.25 \times -4) - 9$
$y = (-2.75 \times -4) - 7$

2) $\begin{cases} y = 0.75x + 6 \\ y = 0.25x + 4 \end{cases}$

$0.75x + 6 = 0.25x + 4$
$0.5x = -2$
$1x = -4$
$y = (0.75 \times -4) + 6$
$y = (0.25 \times -4) + 4$

3) $\begin{cases} y = 4.25x - 7 \\ y = 1.5x + 4 \end{cases}$

$4.25x - 7 = 1.5x + 4$
$2.75x = 11$
$1x = 4$
$y = (4.25 \times 4) - 7$
$y = (1.5 \times 4) + 4$

4) $\begin{cases} y = 0.9x + 3 \\ y = 0.1x - 5 \end{cases}$

$0.9x + 3 = 0.1x - 5$
$0.8x = -8$
$1x = -10$
$y = (0.9 \times -10) + 3$
$y = (0.1 \times -10) - 5$

5) $\begin{cases} y = 0.75x - 4 \\ y = 2.75x + 4 \end{cases}$

$0.75x - 4 = 2.75x + 4$
$-2x = 8$
$1x = -4$
$y = (0.75 \times -4) - 4$
$y = (2.75 \times -4) + 4$

6) $\begin{cases} y = 0.3x + 0 \\ y = 0.7x - 4 \end{cases}$

$0.3x + 0 = 0.7x - 4$
$-0.4x = -4$
$1x = 10$
$y = (0.3 \times 10) + 0$
$y = (0.7 \times 10) - 4$

7) $\begin{cases} y = 0.75x - 2 \\ y = 3.5x + 9 \end{cases}$

$0.75x - 2 = 3.5x + 9$
$-2.75x = 11$
$1x = -4$
$y = (0.75 \times -4) - 2$
$y = (3.5 \times -4) + 9$

8) $\begin{cases} y = -0.5x + 3 \\ y = -1.25x + 6 \end{cases}$

$-0.5x + 3 = -1.25x + 6$
$0.75x = 3$
$1x = 4$
$y = (-0.5 \times 4) + 3$
$y = (-1.25 \times 4) + 6$

9) $\begin{cases} y = 1.8x + 8 \\ y = -0.6x - 4 \end{cases}$

$1.8x + 8 = -0.6x - 4$
$2.4x = -12$
$1x = -5$
$y = (1.8 \times -5) + 8$
$y = (-0.6 \times -5) - 4$

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

$-4.5x - 6 = 0.5x + 4$
$-5x = 10$
$1x = -2$
$y = (-4.5 \times -2) - 6$
$y = (0.5 \times -2) + 4$

Answers

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

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