Identifying Point of Intersection with Equations Name:

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

1) $\begin{cases} y = -0.1x - 3 \\ y = 0.6x + 4 \end{cases}$

2) $\begin{cases} y = -0.1x - 9 \\ y = 0.1x - 7 \end{cases}$

3) $\begin{cases} y = -4.25x + 9 \\ y = -0.75x - 5 \end{cases}$

4) $\begin{cases} y = -1.5x + 8 \\ y = -0.25x - 2 \end{cases}$

5) $\begin{cases} y = -2.5x - 8 \\ y = -1.5x - 6 \end{cases}$

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

7) $\begin{cases} y = -2.25x - 5 \\ y = -2.75x - 7 \end{cases}$

8) $\begin{cases} y = -2.5x - 5 \\ y = -9.5x + 9 \end{cases}$

9) $\begin{cases} y = 0.7x - 2 \\ y = -0.4x + 9 \end{cases}$

10) $\begin{cases} y = -0.1x + 4 \\ y = 0.8x - 5 \end{cases}$

Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

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

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

1) $\begin{cases} y = -0.1x - 3 \\ y = 0.6x + 4 \end{cases}$

$-0.1x - 3 = 0.6x + 4$
$-0.7x = 7$
$1x = -10$
$y = (-0.1 \times -10) - 3$
$y = (0.6 \times -10) + 4$

2) $\begin{cases} y = -0.1x - 9 \\ y = 0.1x - 7 \end{cases}$

$-0.1x - 9 = 0.1x - 7$
$-0.2x = 2$
$1x = -10$
$y = (-0.1 \times -10) - 9$
$y = (0.1 \times -10) - 7$

3) $\begin{cases} y = -4.25x + 9 \\ y = -0.75x - 5 \end{cases}$

$-4.25x + 9 = -0.75x - 5$
$-3.5x = -14$
$1x = 4$
$y = (-4.25 \times 4) + 9$
$y = (-0.75 \times 4) - 5$

4) $\begin{cases} y = -1.5x + 8 \\ y = -0.25x - 2 \end{cases}$

$-1.5x + 8 = -0.25x - 2$
$-1.25x = -10$
$1x = 8$
$y = (-1.5 \times 8) + 8$
$y = (-0.25 \times 8) - 2$

5) $\begin{cases} y = -2.5x - 8 \\ y = -1.5x - 6 \end{cases}$

$-2.5x - 8 = -1.5x - 6$
$-1x = 2$
$1x = -2$
$y = (-2.5 \times -2) - 8$
$y = (-1.5 \times -2) - 6$

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

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

7) $\begin{cases} y = -2.25x - 5 \\ y = -2.75x - 7 \end{cases}$

$-2.25x - 5 = -2.75x - 7$
$0.5x = -2$
$1x = -4$
$y = (-2.25 \times -4) - 5$
$y = (-2.75 \times -4) - 7$

8) $\begin{cases} y = -2.5x - 5 \\ y = -9.5x + 9 \end{cases}$

$-2.5x - 5 = -9.5x + 9$
$7x = 14$
$1x = 2$
$y = (-2.5 \times 2) - 5$
$y = (-9.5 \times 2) + 9$

9) $\begin{cases} y = 0.7x - 2 \\ y = -0.4x + 9 \end{cases}$

$0.7x - 2 = -0.4x + 9$
$1.1x = 11$
$1x = 10$
$y = (0.7 \times 10) - 2$
$y = (-0.4 \times 10) + 9$

10) $\begin{cases} y = -0.1x + 4 \\ y = 0.8x - 5 \end{cases}$

$-0.1x + 4 = 0.8x - 5$
$-0.9x = -9$
$1x = 10$
$y = (-0.1 \times 10) + 4$
$y = (0.8 \times 10) - 5$

Answers

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

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