Identifying Point of Intersection with Equations

Name:

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

1) $\begin{cases} y = 1.5x + 2 \\ y = 5.5x - 6 \end{cases}$

2) $\begin{cases} y = 0.7x - 2 \\ y = 0.6x - 3 \end{cases}$

3) $\begin{cases} y = -0.5x - 4 \\ y = -0.6x - 3 \end{cases}$

4) $\begin{cases} y = -4.5x - 9 \\ y = -3.25x - 4 \end{cases}$

5) $\begin{cases} y = -0.5x - 5 \\ y = 0.9x + 9 \end{cases}$

6) $\begin{cases} y = 0.1x - 1 \\ y = -0.5x + 5 \end{cases}$

7) $\begin{cases} y = 0.1x + 9 \\ y = -0.2x + 6 \end{cases}$

8) $\begin{cases} y = 0.5x - 5 \\ y = 0.75x - 7 \end{cases}$

9) $\begin{cases} y = -0.5x + 2 \\ y = 2.25x - 9 \end{cases}$

10) $\begin{cases} y = 4.25x - 9 \\ y = 3.25x - 5 \end{cases}$

Answers

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

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

Identifying Point of Intersection with Equations Name: **Answer Key**

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

1) $\begin{cases} y = 1.5x + 2 \\ y = 5.5x - 6 \end{cases}$

$1.5x+2 = 5.5x- 6$
$-4x = -8$
$1x = 2$
$y = (1.5\times2)+2$
$y = (5.5\times2)- 6$

2) $\begin{cases} y = 0.7x - 2 \\ y = 0.6x - 3 \end{cases}$

$0.7x- 2 = 0.6x- 3$
$0.1x = -1$
$1x = -10$
$y = (0.7\times-10)- 2$
$y = (0.6\times-10)- 3$

3) $\begin{cases} y = -0.5x - 4 \\ y = -0.6x - 3 \end{cases}$

$-0.5x- 4 = -0.6x- 3$
$0.1x = 1$
$1x = 10$
$y = (-0.5\times10)- 4$
$y = (-0.6\times10)- 3$

4) $\begin{cases} y = -4.5x - 9 \\ y = -3.25x - 4 \end{cases}$

$-4.5x- 9 = -3.25x- 4$
$-1.25x = 5$
$1x = -4$
$y = (-4.5\times-4)- 9$
$y = (-3.25\times-4)- 4$

5) $\begin{cases} y = -0.5x - 5 \\ y = 0.9x + 9 \end{cases}$

$-0.5x- 5 = 0.9x+9$
$-1.4x = 14$
$1x = -10$
$y = (-0.5\times-10)- 5$
$y = (0.9\times-10)+9$

6) $\begin{cases} y = 0.1x - 1 \\ y = -0.5x + 5 \end{cases}$

$0.1x- 1 = -0.5x+5$
$0.6x = 6$
$1x = 10$
$y = (0.1\times10)- 1$
$y = (-0.5\times10)+5$

7) $\begin{cases} y = 0.1x + 9 \\ y = -0.2x + 6 \end{cases}$

$0.1x+9 = -0.2x+6$
$0.3x = -3$
$1x = -10$
$y = (0.1\times-10)+9$
$y = (-0.2\times-10)+6$

8) $\begin{cases} y = 0.5x - 5 \\ y = 0.75x - 7 \end{cases}$

$0.5x- 5 = 0.75x- 7$
$-0.25x = -2$
$1x = 8$
$y = (0.5\times8)- 5$
$y = (0.75\times8)- 7$

9) $\begin{cases} y = -0.5x + 2 \\ y = 2.25x - 9 \end{cases}$

$-0.5x+2 = 2.25x- 9$
$-2.75x = -11$
$1x = 4$
$y = (-0.5\times4)+2$
$y = (2.25\times4)- 9$

10) $\begin{cases} y = 4.25x - 9 \\ y = 3.25x - 5 \end{cases}$

$4.25x- 9 = 3.25x- 5$
$1x = 4$
$1x = 4$
$y = (4.25\times4)- 9$
$y = (3.25\times4)- 5$

Answers

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

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

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

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

1) $\begin{cases} y = -1.3x - 3 \\ y = -0.4x + 6 \end{cases}$

2) $\begin{cases} y = 1.75x + 1 \\ y = 3.25x - 5 \end{cases}$

3) $\begin{cases} y = -1.5x + 4 \\ y = -1.75x + 5 \end{cases}$

4) $\begin{cases} y = 1.25x + 2 \\ y = 0.5x - 1 \end{cases}$

5) $\begin{cases} y = -0.25x + 8 \\ y = -2.25x + 0 \end{cases}$

6) $\begin{cases} y = 0.25x + 7 \\ y = -0.5x + 4 \end{cases}$

7) $\begin{cases} y = -0.25x - 5 \\ y = -0.75x - 9 \end{cases}$

8) $\begin{cases} y = 0.7x - 3 \\ y = 0.6x - 2 \end{cases}$

9) $\begin{cases} y = 0.25x + 2 \\ y = 0.5x + 1 \end{cases}$

10) $\begin{cases} y = -2.5x + 0 \\ y = -0.5x + 8 \end{cases}$

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) $\begin{cases} y = -1.3x - 3 \\ y = -0.4x + 6 \end{cases}$

$-1.3x - 3 = -0.4x + 6$
$-0.9x = 9$
$1x = -10$
$y = (-1.3 \times -10) - 3$
$y = (-0.4 \times -10) + 6$

2) $\begin{cases} y = 1.75x + 1 \\ y = 3.25x - 5 \end{cases}$

$1.75x + 1 = 3.25x - 5$
$-1.5x = -6$
$1x = 4$
$y = (1.75 \times 4) + 1$
$y = (3.25 \times 4) - 5$

3) $\begin{cases} y = -1.5x + 4 \\ y = -1.75x + 5 \end{cases}$

$-1.5x + 4 = -1.75x + 5$
$0.25x = 1$
$1x = 4$
$y = (-1.5 \times 4) + 4$
$y = (-1.75 \times 4) + 5$

4) $\begin{cases} y = 1.25x + 2 \\ y = 0.5x - 1 \end{cases}$

$1.25x + 2 = 0.5x - 1$
$0.75x = -3$
$1x = -4$
$y = (1.25 \times -4) + 2$
$y = (0.5 \times -4) - 1$

5) $\begin{cases} y = -0.25x + 8 \\ y = -2.25x + 0 \end{cases}$

$-0.25x + 8 = -2.25x + 0$
$2x = -8$
$1x = -4$
$y = (-0.25 \times -4) + 8$
$y = (-2.25 \times -4) + 0$

6) $\begin{cases} y = 0.25x + 7 \\ y = -0.5x + 4 \end{cases}$

$0.25x + 7 = -0.5x + 4$
$0.75x = -3$
$1x = -4$
$y = (0.25 \times -4) + 7$
$y = (-0.5 \times -4) + 4$

7) $\begin{cases} y = -0.25x - 5 \\ y = -0.75x - 9 \end{cases}$

$-0.25x - 5 = -0.75x - 9$
$0.5x = -4$
$1x = -8$
$y = (-0.25 \times -8) - 5$
$y = (-0.75 \times -8) - 9$

8) $\begin{cases} y = 0.7x - 3 \\ y = 0.6x - 2 \end{cases}$

$0.7x - 3 = 0.6x - 2$
$0.1x = 1$
$1x = 10$
$y = (0.7 \times 10) - 3$
$y = (0.6 \times 10) - 2$

9) $\begin{cases} y = 0.25x + 2 \\ y = 0.5x + 1 \end{cases}$

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

10) $\begin{cases} y = -2.5x + 0 \\ y = -0.5x + 8 \end{cases}$

$-2.5x + 0 = -0.5x + 8$
$-2x = 8$
$1x = -4$
$y = (-2.5 \times -4) + 0$
$y = (-0.5 \times -4) + 8$

Answers

1. **(-10 , 10)**
2. **(4 , 8)**
3. **(4 , -2)**
4. **(-4 , -3)**
5. **(-4 , 9)**
6. **(-4 , 6)**
7. **(-8 , -3)**
8. **(10 , 4)**
9. **(4 , 3)**
10. **(-4 , 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) $\begin{cases} y = 1.25x - 8 \\ y = 0.25x + 0 \end{cases}$

2) $\begin{cases} y = 0.8x + 5 \\ y = 0.2x - 1 \end{cases}$

3) $\begin{cases} y = -2.25x - 3 \\ y = -2.5x - 4 \end{cases}$

4) $\begin{cases} y = 5.5x - 1 \\ y = 8.5x - 7 \end{cases}$

5) $\begin{cases} y = -3.75x - 5 \\ y = -1.25x + 5 \end{cases}$

6) $\begin{cases} y = -0.6x + 3 \\ y = 0.2x - 1 \end{cases}$

7) $\begin{cases} y = 0.7x - 5 \\ y = 0.9x - 7 \end{cases}$

8) $\begin{cases} y = -2.25x + 1 \\ y = -4.25x - 7 \end{cases}$

9) $\begin{cases} y = 0.75x + 1 \\ y = 1.75x + 9 \end{cases}$

10) $\begin{cases} y = -1.75x + 8 \\ y = -1.25x + 4 \end{cases}$

Answers

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

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

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

1) $\begin{cases} y = 1.25x - 8 \\ y = 0.25x + 0 \end{cases}$

$1.25x - 8 = 0.25x + 0$
$1x = 8$
$1x = 8$
$y = (1.25 \times 8) - 8$
$y = (0.25 \times 8) + 0$

2) $\begin{cases} y = 0.8x + 5 \\ y = 0.2x - 1 \end{cases}$

$0.8x + 5 = 0.2x - 1$
$0.6x = -6$
$1x = -10$
$y = (0.8 \times -10) + 5$
$y = (0.2 \times -10) - 1$

3) $\begin{cases} y = -2.25x - 3 \\ y = -2.5x - 4 \end{cases}$

$-2.25x - 3 = -2.5x - 4$
$0.25x = -1$
$1x = -4$
$y = (-2.25 \times -4) - 3$
$y = (-2.5 \times -4) - 4$

4) $\begin{cases} y = 5.5x - 1 \\ y = 8.5x - 7 \end{cases}$

$5.5x - 1 = 8.5x - 7$
$-3x = -6$
$1x = 2$
$y = (5.5 \times 2) - 1$
$y = (8.5 \times 2) - 7$

5) $\begin{cases} y = -3.75x - 5 \\ y = -1.25x + 5 \end{cases}$

$-3.75x - 5 = -1.25x + 5$
$-2.5x = 10$
$1x = -4$
$y = (-3.75 \times -4) - 5$
$y = (-1.25 \times -4) + 5$

6) $\begin{cases} y = -0.6x + 3 \\ y = 0.2x - 1 \end{cases}$

$-0.6x + 3 = 0.2x - 1$
$-0.8x = -4$
$1x = 5$
$y = (-0.6 \times 5) + 3$
$y = (0.2 \times 5) - 1$

7) $\begin{cases} y = 0.7x - 5 \\ y = 0.9x - 7 \end{cases}$

$0.7x - 5 = 0.9x - 7$
$-0.2x = -2$
$1x = 10$
$y = (0.7 \times 10) - 5$
$y = (0.9 \times 10) - 7$

8) $\begin{cases} y = -2.25x + 1 \\ y = -4.25x - 7 \end{cases}$

$-2.25x + 1 = -4.25x - 7$
$2x = -8$
$1x = -4$
$y = (-2.25 \times -4) + 1$
$y = (-4.25 \times -4) - 7$

9) $\begin{cases} y = 0.75x + 1 \\ y = 1.75x + 9 \end{cases}$

$0.75x + 1 = 1.75x + 9$
$-1x = 8$
$1x = -8$
$y = (0.75 \times -8) + 1$
$y = (1.75 \times -8) + 9$

10) $\begin{cases} y = -1.75x + 8 \\ y = -1.25x + 4 \end{cases}$

$-1.75x + 8 = -1.25x + 4$
$-0.5x = -4$
$1x = 8$
$y = (-1.75 \times 8) + 8$
$y = (-1.25 \times 8) + 4$

Answers

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

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

Identifying Point of Intersection with Equations Name:

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

1) $\begin{cases} y = 0.9x + 1 \\ y = 1.7x - 7 \end{cases}$

2) $\begin{cases} y = -0.6x + 1 \\ y = -1.2x - 2 \end{cases}$

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

4) $\begin{cases} y = -0.4x + 7 \\ y = -0.6x + 9 \end{cases}$

5) $\begin{cases} y = -1.25x + 4 \\ y = -4.5x - 9 \end{cases}$

6) $\begin{cases} y = 5.5x - 5 \\ y = -0.5x + 7 \end{cases}$

7) $\begin{cases} y = 1.75x - 5 \\ y = 0.5x + 5 \end{cases}$

8) $\begin{cases} y = -1.2x + 2 \\ y = -1.3x + 3 \end{cases}$

9) $\begin{cases} y = -0.25x - 2 \\ y = 1.5x - 9 \end{cases}$

10) $\begin{cases} y = -0.2x + 3 \\ y = -1.2x + 8 \end{cases}$

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) $\begin{cases} y = 0.9x + 1 \\ y = 1.7x - 7 \end{cases}$

$0.9x+1 = 1.7x- 7$
$-0.8x = -8$
$1x = 10$
$y = (0.9\times10)+1$
$y = (1.7\times10)- 7$

2) $\begin{cases} y = -0.6x + 1 \\ y = -1.2x - 2 \end{cases}$

$-0.6x+1 = -1.2x- 2$
$0.6x = -3$
$1x = -5$
$y = (-0.6\times-5)+1$
$y = (-1.2\times-5)- 2$

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

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

4) $\begin{cases} y = -0.4x + 7 \\ y = -0.6x + 9 \end{cases}$

$-0.4x+7 = -0.6x+9$
$0.2x = 2$
$1x = 10$
$y = (-0.4\times10)+7$
$y = (-0.6\times10)+9$

5) $\begin{cases} y = -1.25x + 4 \\ y = -4.5x - 9 \end{cases}$

$-1.25x+4 = -4.5x- 9$
$3.25x = -13$
$1x = -4$
$y = (-1.25\times-4)+4$
$y = (-4.5\times-4)- 9$

6) $\begin{cases} y = 5.5x - 5 \\ y = -0.5x + 7 \end{cases}$

$5.5x- 5 = -0.5x+7$
$6x = 12$
$1x = 2$
$y = (5.5\times2)- 5$
$y = (-0.5\times2)+7$

7) $\begin{cases} y = 1.75x - 5 \\ y = 0.5x + 5 \end{cases}$

$1.75x- 5 = 0.5x+5$
$1.25x = 10$
$1x = 8$
$y = (1.75\times8)- 5$
$y = (0.5\times8)+5$

8) $\begin{cases} y = -1.2x + 2 \\ y = -1.3x + 3 \end{cases}$

$-1.2x+2 = -1.3x+3$
$0.1x = 1$
$1x = 10$
$y = (-1.2\times10)+2$
$y = (-1.3\times10)+3$

9) $\begin{cases} y = -0.25x - 2 \\ y = 1.5x - 9 \end{cases}$

$-0.25x- 2 = 1.5x- 9$
$-1.75x = -7$
$1x = 4$
$y = (-0.25\times4)- 2$
$y = (1.5\times4)- 9$

10) $\begin{cases} y = -0.2x + 3 \\ y = -1.2x + 8 \end{cases}$

$-0.2x+3 = -1.2x+8$
$1x = 5$
$1x = 5$
$y = (-0.2\times5)+3$
$y = (-1.2\times5)+8$

Answers

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

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) $\begin{cases} y = 0.1x + 2 \\ y = 0.5x - 2 \end{cases}$

2) $\begin{cases} y = -1.3x + 5 \\ y = -0.4x - 4 \end{cases}$

3) $\begin{cases} y = -0.2x + 8 \\ y = 1.5x - 9 \end{cases}$

4) $\begin{cases} y = -4.25x + 8 \\ y = -2.5x + 1 \end{cases}$

5) $\begin{cases} y = -1.5x - 3 \\ y = -0.5x + 5 \end{cases}$

6) $\begin{cases} y = 0.3x - 9 \\ y = -0.5x - 1 \end{cases}$

7) $\begin{cases} y = 0.3x + 1 \\ y = 0.5x - 1 \end{cases}$

8) $\begin{cases} y = -0.2x + 0 \\ y = 0.4x - 6 \end{cases}$

9) $\begin{cases} y = -1.5x + 1 \\ y = -3.5x - 3 \end{cases}$

10) $\begin{cases} y = -0.25x - 2 \\ y = -0.5x + 0 \end{cases}$

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) $\begin{cases} y = 0.1x + 2 \\ y = 0.5x - 2 \end{cases}$

$0.1x+2 = 0.5x- 2$
$-0.4x = -4$
$1x = 10$
$y = (0.1\times10)+2$
$y = (0.5\times10)- 2$

2) $\begin{cases} y = -1.3x + 5 \\ y = -0.4x - 4 \end{cases}$

$-1.3x+5 = -0.4x- 4$
$-0.9x = -9$
$1x = 10$
$y = (-1.3\times10)+5$
$y = (-0.4\times10)- 4$

3) $\begin{cases} y = -0.2x + 8 \\ y = 1.5x - 9 \end{cases}$

$-0.2x+8 = 1.5x- 9$
$-1.7x = -17$
$1x = 10$
$y = (-0.2\times10)+8$
$y = (1.5\times10)- 9$

4) $\begin{cases} y = -4.25x + 8 \\ y = -2.5x + 1 \end{cases}$

$-4.25x+8 = -2.5x+1$
$-1.75x = -7$
$1x = 4$
$y = (-4.25\times4)+8$
$y = (-2.5\times4)+1$

5) $\begin{cases} y = -1.5x - 3 \\ y = -0.5x + 5 \end{cases}$

$-1.5x- 3 = -0.5x+5$
$-1x = 8$
$1x = -8$
$y = (-1.5\times-8)- 3$
$y = (-0.5\times-8)+5$

6) $\begin{cases} y = 0.3x - 9 \\ y = -0.5x - 1 \end{cases}$

$0.3x- 9 = -0.5x- 1$
$0.8x = 8$
$1x = 10$
$y = (0.3\times10)- 9$
$y = (-0.5\times10)- 1$

7) $\begin{cases} y = 0.3x + 1 \\ y = 0.5x - 1 \end{cases}$

$0.3x+1 = 0.5x- 1$
$-0.2x = -2$
$1x = 10$
$y = (0.3\times10)+1$
$y = (0.5\times10)- 1$

8) $\begin{cases} y = -0.2x + 0 \\ y = 0.4x - 6 \end{cases}$

$-0.2x+0 = 0.4x- 6$
$-0.6x = -6$
$1x = 10$
$y = (-0.2\times10)+0$
$y = (0.4\times10)- 6$

9) $\begin{cases} y = -1.5x + 1 \\ y = -3.5x - 3 \end{cases}$

$-1.5x+1 = -3.5x- 3$
$2x = -4$
$1x = -2$
$y = (-1.5\times-2)+1$
$y = (-3.5\times-2)- 3$

10) $\begin{cases} y = -0.25x - 2 \\ y = -0.5x + 0 \end{cases}$

$-0.25x- 2 = -0.5x+0$
$0.25x = 2$
$1x = 8$
$y = (-0.25\times8)- 2$
$y = (-0.5\times8)+0$

Answers

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

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

Identifying Point of Intersection with Equations Name:

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

1) $\begin{cases} y = 0.5x - 2 \\ y = 1.75x + 3 \end{cases}$

2) $\begin{cases} y = 1.8x + 9 \\ y = 0.2x - 7 \end{cases}$

3) $\begin{cases} y = -0.75x - 8 \\ y = 2.75x + 6 \end{cases}$

4) $\begin{cases} y = 2.75x + 8 \\ y = -1.25x - 8 \end{cases}$

5) $\begin{cases} y = -0.4x + 6 \\ y = -0.1x + 3 \end{cases}$

6) $\begin{cases} y = 0.5x + 4 \\ y = 0.9x + 0 \end{cases}$

7) $\begin{cases} y = -4.75x + 9 \\ y = -1.75x - 3 \end{cases}$

8) $\begin{cases} y = -1.5x + 6 \\ y = 1.5x + 0 \end{cases}$

9) $\begin{cases} y = 0.2x - 1 \\ y = 0.8x + 5 \end{cases}$

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

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) $\begin{cases} y = 0.5x - 2 \\ y = 1.75x + 3 \end{cases}$

$0.5x - 2 = 1.75x + 3$
$-1.25x = 5$
$1x = -4$
$y = (0.5 \times -4) - 2$
$y = (1.75 \times -4) + 3$

2) $\begin{cases} y = 1.8x + 9 \\ y = 0.2x - 7 \end{cases}$

$1.8x + 9 = 0.2x - 7$
$1.6x = -16$
$1x = -10$
$y = (1.8 \times -10) + 9$
$y = (0.2 \times -10) - 7$

3) $\begin{cases} y = -0.75x - 8 \\ y = 2.75x + 6 \end{cases}$

$-0.75x - 8 = 2.75x + 6$
$-3.5x = 14$
$1x = -4$
$y = (-0.75 \times -4) - 8$
$y = (2.75 \times -4) + 6$

4) $\begin{cases} y = 2.75x + 8 \\ y = -1.25x - 8 \end{cases}$

$2.75x + 8 = -1.25x - 8$
$4x = -16$
$1x = -4$
$y = (2.75 \times -4) + 8$
$y = (-1.25 \times -4) - 8$

5) $\begin{cases} y = -0.4x + 6 \\ y = -0.1x + 3 \end{cases}$

$-0.4x + 6 = -0.1x + 3$
$-0.3x = -3$
$1x = 10$
$y = (-0.4 \times 10) + 6$
$y = (-0.1 \times 10) + 3$

6) $\begin{cases} y = 0.5x + 4 \\ y = 0.9x + 0 \end{cases}$

$0.5x + 4 = 0.9x + 0$
$-0.4x = -4$
$1x = 10$
$y = (0.5 \times 10) + 4$
$y = (0.9 \times 10) + 0$

7) $\begin{cases} y = -4.75x + 9 \\ y = -1.75x - 3 \end{cases}$

$-4.75x + 9 = -1.75x - 3$
$-3x = -12$
$1x = 4$
$y = (-4.75 \times 4) + 9$
$y = (-1.75 \times 4) - 3$

8) $\begin{cases} y = -1.5x + 6 \\ y = 1.5x + 0 \end{cases}$

$-1.5x + 6 = 1.5x + 0$
$-3x = -6$
$1x = 2$
$y = (-1.5 \times 2) + 6$
$y = (1.5 \times 2) + 0$

9) $\begin{cases} y = 0.2x - 1 \\ y = 0.8x + 5 \end{cases}$

$0.2x - 1 = 0.8x + 5$
$-0.6x = 6$
$1x = -10$
$y = (0.2 \times -10) - 1$
$y = (0.8 \times -10) + 5$

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

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

Answers

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

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

Identifying Point of Intersection with Equations Name:

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

1) $\begin{cases} y = -0.25x + 7 \\ y = 2.25x - 3 \end{cases}$

2) $\begin{cases} y = -7.5x + 6 \\ y = -3.5x - 2 \end{cases}$

3) $\begin{cases} y = 2.25x - 1 \\ y = 3.5x - 6 \end{cases}$

4) $\begin{cases} y = -1.5x - 9 \\ y = -0.6x + 0 \end{cases}$

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

6) $\begin{cases} y = -0.5x + 9 \\ y = 0.75x - 1 \end{cases}$

7) $\begin{cases} y = -0.4x + 2 \\ y = 0.2x + 8 \end{cases}$

8) $\begin{cases} y = 7.5x - 7 \\ y = 4.5x - 1 \end{cases}$

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

10) $\begin{cases} y = -0.5x - 8 \\ y = 0.1x - 2 \end{cases}$

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) $\begin{cases} y = -0.25x + 7 \\ y = 2.25x - 3 \end{cases}$

$-0.25x+7 = 2.25x- 3$
$-2.5x = -10$
$1x = 4$
$y = (-0.25\times4)+7$
$y = (2.25\times4)- 3$

2) $\begin{cases} y = -7.5x + 6 \\ y = -3.5x - 2 \end{cases}$

$-7.5x+6 = -3.5x- 2$
$-4x = -8$
$1x = 2$
$y = (-7.5\times2)+6$
$y = (-3.5\times2)- 2$

3) $\begin{cases} y = 2.25x - 1 \\ y = 3.5x - 6 \end{cases}$

$2.25x- 1 = 3.5x- 6$
$-1.25x = -5$
$1x = 4$
$y = (2.25\times4)- 1$
$y = (3.5\times4)- 6$

4) $\begin{cases} y = -1.5x - 9 \\ y = -0.6x + 0 \end{cases}$

$-1.5x- 9 = -0.6x+0$
$-0.9x = 9$
$1x = -10$
$y = (-1.5\times-10)- 9$
$y = (-0.6\times-10)+0$

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

$0.25x- 3 = -1.25x+3$
$1.5x = 6$
$1x = 4$
$y = (0.25\times4)- 3$
$y = (-1.25\times4)+3$

6) $\begin{cases} y = -0.5x + 9 \\ y = 0.75x - 1 \end{cases}$

$-0.5x+9 = 0.75x- 1$
$-1.25x = -10$
$1x = 8$
$y = (-0.5\times8)+9$
$y = (0.75\times8)- 1$

7) $\begin{cases} y = -0.4x + 2 \\ y = 0.2x + 8 \end{cases}$

$-0.4x+2 = 0.2x+8$
$-0.6x = 6$
$1x = -10$
$y = (-0.4\times-10)+2$
$y = (0.2\times-10)+8$

8) $\begin{cases} y = 7.5x - 7 \\ y = 4.5x - 1 \end{cases}$

$7.5x- 7 = 4.5x- 1$
$3x = 6$
$1x = 2$
$y = (7.5\times2)- 7$
$y = (4.5\times2)- 1$

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

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

10) $\begin{cases} y = -0.5x - 8 \\ y = 0.1x - 2 \end{cases}$

$-0.5x- 8 = 0.1x- 2$
$-0.6x = 6$
$1x = -10$
$y = (-0.5\times-10)- 8$
$y = (0.1\times-10)- 2$

Answers

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

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) $\begin{cases} y = 1.5x - 8 \\ y = -0.1x + 8 \end{cases}$

2) $\begin{cases} y = -1.3x - 6 \\ y = -0.1x + 6 \end{cases}$

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

4) $\begin{cases} y = 0.75x + 5 \\ y = 3.5x - 6 \end{cases}$

5) $\begin{cases} y = -0.1x + 2 \\ y = -0.3x + 0 \end{cases}$

6) $\begin{cases} y = -2.5x - 8 \\ y = -0.75x - 1 \end{cases}$

7) $\begin{cases} y = -1.3x + 4 \\ y = -1.5x + 6 \end{cases}$

8) $\begin{cases} y = 0.2x - 2 \\ y = -0.4x + 1 \end{cases}$

9) $\begin{cases} y = 0.4x + 5 \\ y = 0.9x + 0 \end{cases}$

10) $\begin{cases} y = 3.5x + 4 \\ y = 1.5x + 0 \end{cases}$

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) $\begin{cases} y = 1.5x - 8 \\ y = -0.1x + 8 \end{cases}$

$1.5x - 8 = -0.1x + 8$
$1.6x = 16$
$1x = 10$
$y = (1.5 \times 10) - 8$
$y = (-0.1 \times 10) + 8$

2) $\begin{cases} y = -1.3x - 6 \\ y = -0.1x + 6 \end{cases}$

$-1.3x - 6 = -0.1x + 6$
$-1.2x = 12$
$1x = -10$
$y = (-1.3 \times -10) - 6$
$y = (-0.1 \times -10) + 6$

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

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

4) $\begin{cases} y = 0.75x + 5 \\ y = 3.5x - 6 \end{cases}$

$0.75x + 5 = 3.5x - 6$
$-2.75x = -11$
$1x = 4$
$y = (0.75 \times 4) + 5$
$y = (3.5 \times 4) - 6$

5) $\begin{cases} y = -0.1x + 2 \\ y = -0.3x + 0 \end{cases}$

$-0.1x + 2 = -0.3x + 0$
$0.2x = -2$
$1x = -10$
$y = (-0.1 \times -10) + 2$
$y = (-0.3 \times -10) + 0$

6) $\begin{cases} y = -2.5x - 8 \\ y = -0.75x - 1 \end{cases}$

$-2.5x - 8 = -0.75x - 1$
$-1.75x = 7$
$1x = -4$
$y = (-2.5 \times -4) - 8$
$y = (-0.75 \times -4) - 1$

7) $\begin{cases} y = -1.3x + 4 \\ y = -1.5x + 6 \end{cases}$

$-1.3x + 4 = -1.5x + 6$
$0.2x = 2$
$1x = 10$
$y = (-1.3 \times 10) + 4$
$y = (-1.5 \times 10) + 6$

8) $\begin{cases} y = 0.2x - 2 \\ y = -0.4x + 1 \end{cases}$

$0.2x - 2 = -0.4x + 1$
$0.6x = 3$
$1x = 5$
$y = (0.2 \times 5) - 2$
$y = (-0.4 \times 5) + 1$

9) $\begin{cases} y = 0.4x + 5 \\ y = 0.9x + 0 \end{cases}$

$0.4x + 5 = 0.9x + 0$
$-0.5x = -5$
$1x = 10$
$y = (0.4 \times 10) + 5$
$y = (0.9 \times 10) + 0$

10) $\begin{cases} y = 3.5x + 4 \\ y = 1.5x + 0 \end{cases}$

$3.5x + 4 = 1.5x + 0$
$2x = -4$
$1x = -2$
$y = (3.5 \times -2) + 4$
$y = (1.5 \times -2) + 0$

Answers

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

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) $\begin{cases} y = -0.2x - 2 \\ y = -0.4x - 4 \end{cases}$

2) $\begin{cases} y = -4.25x - 8 \\ y = -0.25x + 8 \end{cases}$

3) $\begin{cases} y = 3.5x + 5 \\ y = 3.25x + 4 \end{cases}$

4) $\begin{cases} y = 6.5x + 9 \\ y = 4.5x + 5 \end{cases}$

5) $\begin{cases} y = -2.5x - 8 \\ y = -0.5x - 4 \end{cases}$

6) $\begin{cases} y = 0.5x - 6 \\ y = 5.5x + 4 \end{cases}$

7) $\begin{cases} y = -0.1x + 5 \\ y = 0.6x - 2 \end{cases}$

8) $\begin{cases} y = 1.5x - 7 \\ y = 0.1x + 7 \end{cases}$

9) $\begin{cases} y = 0.3x - 5 \\ y = -0.3x + 1 \end{cases}$

10) $\begin{cases} y = 1.8x - 2 \\ y = 0.4x + 5 \end{cases}$

Answers

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

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

Identifying Point of Intersection with Equations Name: **Answer Key**

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

1) $\begin{cases} y = -0.2x - 2 \\ y = -0.4x - 4 \end{cases}$

$-0.2x - 2 = -0.4x - 4$
$0.2x = -2$
$1x = -10$
$y = (-0.2 \times -10) - 2$
$y = (-0.4 \times -10) - 4$

2) $\begin{cases} y = -4.25x - 8 \\ y = -0.25x + 8 \end{cases}$

$-4.25x - 8 = -0.25x + 8$
$-4x = 16$
$1x = -4$
$y = (-4.25 \times -4) - 8$
$y = (-0.25 \times -4) + 8$

3) $\begin{cases} y = 3.5x + 5 \\ y = 3.25x + 4 \end{cases}$

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

4) $\begin{cases} y = 6.5x + 9 \\ y = 4.5x + 5 \end{cases}$

$6.5x + 9 = 4.5x + 5$
$2x = -4$
$1x = -2$
$y = (6.5 \times -2) + 9$
$y = (4.5 \times -2) + 5$

5) $\begin{cases} y = -2.5x - 8 \\ y = -0.5x - 4 \end{cases}$

$-2.5x - 8 = -0.5x - 4$
$-2x = 4$
$1x = -2$
$y = (-2.5 \times -2) - 8$
$y = (-0.5 \times -2) - 4$

6) $\begin{cases} y = 0.5x - 6 \\ y = 5.5x + 4 \end{cases}$

$0.5x - 6 = 5.5x + 4$
$-5x = 10$
$1x = -2$
$y = (0.5 \times -2) - 6$
$y = (5.5 \times -2) + 4$

7) $\begin{cases} y = -0.1x + 5 \\ y = 0.6x - 2 \end{cases}$

$-0.1x + 5 = 0.6x - 2$
$-0.7x = -7$
$1x = 10$
$y = (-0.1 \times 10) + 5$
$y = (0.6 \times 10) - 2$

8) $\begin{cases} y = 1.5x - 7 \\ y = 0.1x + 7 \end{cases}$

$1.5x - 7 = 0.1x + 7$
$1.4x = 14$
$1x = 10$
$y = (1.5 \times 10) - 7$
$y = (0.1 \times 10) + 7$

9) $\begin{cases} y = 0.3x - 5 \\ y = -0.3x + 1 \end{cases}$

$0.3x - 5 = -0.3x + 1$
$0.6x = 6$
$1x = 10$
$y = (0.3 \times 10) - 5$
$y = (-0.3 \times 10) + 1$

10) $\begin{cases} y = 1.8x - 2 \\ y = 0.4x + 5 \end{cases}$

$1.8x - 2 = 0.4x + 5$
$1.4x = 7$
$1x = 5$
$y = (1.8 \times 5) - 2$
$y = (0.4 \times 5) + 5$

Answers

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

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