

Lesson #12: Understanding and Solving Systems of Equations: Graphing Method
(Reference: Lesson #55 in book)**Problem**

1. For each of the following systems of equations, please determine whether the given point is a solution to the system of equations or not. Then in words explain why it is a solution or not to the system of equations. (SHOW ALL OF YOUR WORK.)

1. (2,5)

$$5x + y = 15$$

$$3x - 2y = -4$$

2. (1,2)

$$4x + y = 5$$

$$3x - 9y = 21$$

3. (3,1)

$$2x + 4y = 14$$

$$5x - 3y = 9$$

4. (1,3)

$$3x + 3y = 12$$

$$4x - 2y = -2$$

5. For each of the following systems of equations, please solve the system by graphing method and expression the solution as a coordinate point. Then show and explain in words why it is a solution to the system of equations. (SHOW ALL OF YOUR WORK.)

5. $-x + y = 3$

$$-2x + y = 1$$

6. $-4x - 2y = 4$

$$3x + y = -5$$

7. $6x + 3y = -6$

$$-3x - y = 5$$

8. $-6x + 3y = -15$

$$6x + 2y = 30$$

9. $-2x - 4y = -16$
 $-3x + 12y = -24$

10. $-6x - 2y = -18$
 $4x + 8y = 32$

11. $-8x - 2y = -6$
 $-9x + 3y = -12$

12. $4x - 12y = 36$
 $-4x - 8y = -16$

1. For each of the following systems of equations, please determine whether the given point is a solution to the system of equations or not. Then in words explain why it is a solution or not a solution to the system of equations. (SHOW ALL OF YOUR WORK.)

1. (2, 3)
 $2x + y = 7$
 $3x - 2y = -4$

2. (1, 2)
 $x + y = 3$
 $2x - 3y = 31$

3. (2, 1)
 $2x + 4y = 14$
 $2x - 3y = 9$

4. (1, 3)
 $2x + 3y = 13$
 $4x - 2y = -5$

2. For each of the following systems of equations, please solve the system by graphing method and express the solution as a coordinate point. Then show and explain in words why it is a solution to the system of equations. (SHOW ALL OF YOUR WORK.)

1. $-x + y = 3$
 $-2x + y = 1$

2. $-4x - 3y = 4$
 $3x + y = -2$

3. $6x + 3y = -6$
 $-3x - y = 2$

4. $-6x + 3y = -12$
 $6x + 2y = 30$