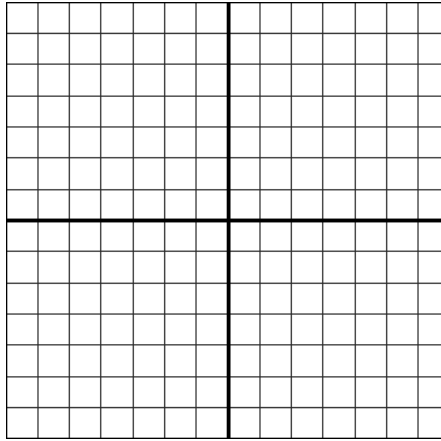


Name: _____ Date: _____ Block: _____

Algebra 1: Solving Systems Using All 3 Methods – Review
Sections 7.1, 7.2, 7.3

Solve the following systems by graphing. Be sure to check your work at the end.

1. $x + y = -2$
 $2x - 3y = -9$



Steps to Follow

1. Make sure both equations are in slope-intercept form ($y = mx + b$)
2. Graph each line on the same coordinate plane (start at the y-intercept, and move with your slope – rise over run)
3. Find the point of intersection
4. Check the coordinates of the point by plugging them back in to both equations

Slope Intercept Form (list equations):

Equation 1:

Equation 2:

Check Work:

Plug back in to equation 1:

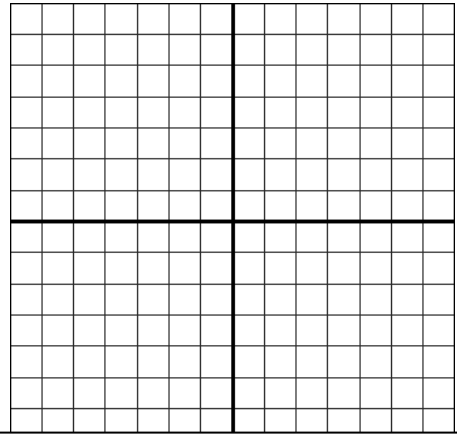
Plug back in to equation 2:

True statement for both?

Answer:

2. $3x + y = 11$
 $x - 2y = 6$

Answer:



Slope Intercept Form (list equations):

Equation 1:

Equation 2:

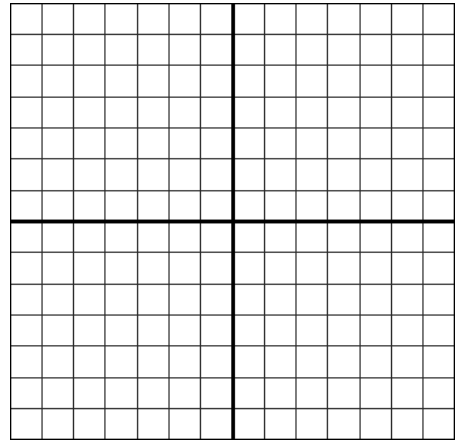
Check Work:

Plug back in to equation 1: Plug back in to equation 2:

True statement for both?

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

Answer:



Slope Intercept Form:

Equation 1:

Equation 2:

Check Work:

Plug back in to equation 1: Plug back in to equation 2:

True statement for both?

Solve the following systems using the substitution method. Be sure to show all of your work, and to check your answer at the end.

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

Step 1:

Steps to Follow

1. Pick a variable to solve for (get by itself)
2. Write the other equation that you have not used yet
3. Substitute the expression from step 1 into the other equation for the variable you solved for and solve
4. Plug that number back in to either one of the equations to get the last variable
5. Check your answer by plugging it back in to both original equations

Step 2:

Step 3:

Answer:

Check Work:

Plug back in to equation 1:

Plug back in to equation 2:

True statement for both?

5. $2x + 2y = 3$
 $x - 4y = -1$

Step 1:

Step 2:

Step 3:

Check Work:

Plug back in to equation 1:

Plug back in to equation 2:

Answer:

True statement for both?

6. $3x + y = 5$
 $2x - y = 10$

Answer:

Solve the following systems using the elimination method. Be sure to show all of your work and to check your answer at the end.

7. $3x = -6y + 12$
 $-x + 3y = 6$

Step 1: Rearrange

Step 2/3: Multiply (eliminate a variable)

Step 4: Plug back in

Check:

Steps to Follow

1. Arrange the equations with like terms in columns (standard form)
2. Multiply one (or both) of the equations by a number to get one of the variables to cancel out
 - Coefficients need to be opposites
3. Add the equations vertically. Combining like terms will eliminate one of the variables
 - Solve for the remaining variable
4. Plug that value back in to one of the original equations and solve for the other variable
5. Check your answer by plugging it back in to both of the original equations

8. $11x + 3y = 1$
 $-5x - 3y = -7$

9. $3y = -5x + 15$
 $-y = -3x + 9$

Solve #9-10 using the elimination method.
Be sure to show all of your work, check your work, and clearly label your answer.

10. $2m - 4 = 4n$
 $m - 2 = n$

Solve the following systems in your notebook. You may choose a method to solve them. For whatever method you choose, be sure to show all of your work, check your work at the end, and to clearly label your answers.

11. $x + 2y = 5$
 $5x - y = 3$

12. $3x + y = 5$
 $-x + y = -7$

13. $x - 2y = 0$
 $3x - y = 0$

14. $x + 7y = 12$
 $3x - 5y = 10$

15. $-12x + y = 15$
 $3x + 2y = 3$

16. $4x + 3y = 31$
 $y = 2x + 7$