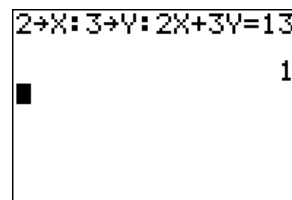


Is this point a solution?

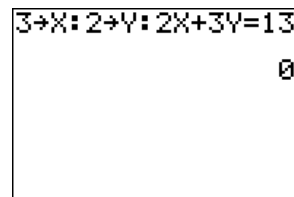
The coordinate (x, y) represent points on the Cartesian plane. The graph of a given equation is the set of all points on the Cartesian plane that make the equation true when the x - and y -values are substituted into the equation. The equation $x + y = 6$ is a true statement as long as the x - and y -values add up to 6. Such points as $(-1,7)$, $(0,6)$, $(1,5)$, $(3,3)$, $(4.25, 1.75)$, $(1\frac{1}{3}, 4\frac{2}{3})$, etc. will create a true statement when the x - and y -values are substituted into the equation. Once the several points are located, they can be graphed to view a picture of the equation.

The graphing calculator can be used to check to see if a point is a solution of a given equation. Suppose we want to find out if $(2, 3)$ is a solution of $2x+3y=13$.

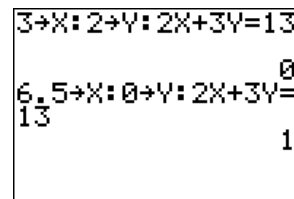
- On the homescreen type 2 STO x:3 STO y:2x+3y=13. When ENTER is pressed, the calculator prints a 1 indicating the point is a solution to the equation.



- On the homescreen type 3 STO x:2 STO y:2x+3y=13. When ENTER is pressed, the calculator prints a 0 indicating the point is not a solution to the equation.



- To try another point, you can bring the line back and replace the x - and y -values with new values. Press 2nd ENTER and the last entry line will be returned to the homescreen. Use the cursor arrows to position the cursor so you can replace the variables with new values.



Use the graphing calculator to determine if the given points are solutions of the equation.

- $x + 2y = 5$; $(1,3)$, $(-1,3)$, $(0,3)$, $(5,0)$
- $3x - y = 4$; $(1,1)$, $(2,-2)$, $(0,-4)$, $(1,-1)$
- $(\frac{3}{2})x - 2y = 0$; $(0,0)$, $(1,-\frac{3}{4})$, $(2,-1)$, $(-1,-\frac{3}{4})$
- $3x + 2y = 12$; $(0,0)$, $(-1,4.5)$, $(2,3)$, $(\frac{1}{3}, -\frac{1}{2})$
- $(\frac{1}{2})x + 3y = 4$; $(0,0)$, $(0,4/3)$, $(2.5,1/3)$, $(2, -1)$

Find at least three points that are solutions to each equation. Use your graphing calculator to confirm that each point is a solution to the equation.

6. $x - y = 8$

7. $2x - y = 4$

8. $3x + y = 9$

9. $2x - 2y = 0$

10. $x - 3y = 4$