

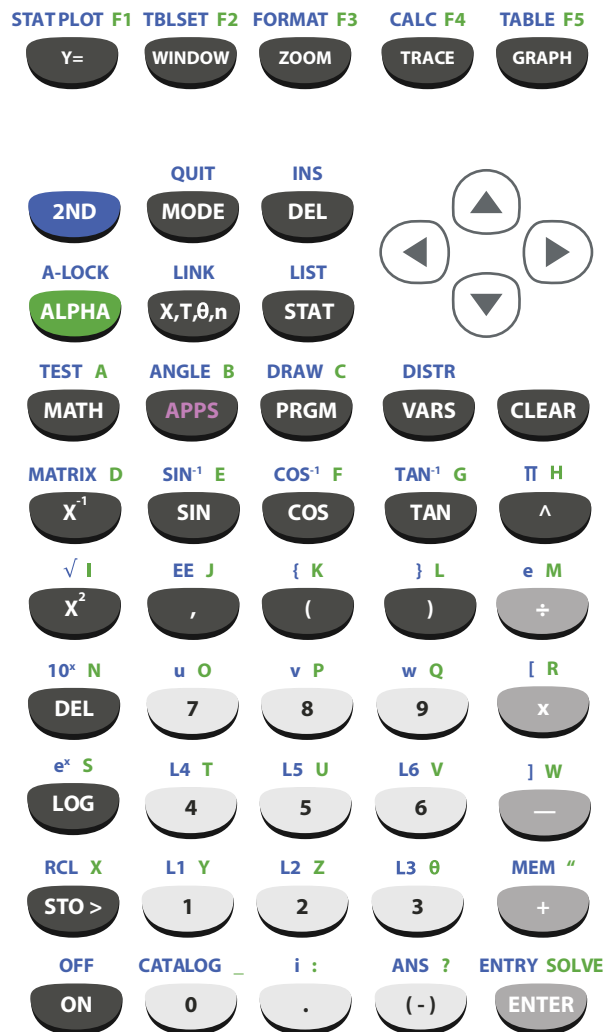


# Lesson 4.3

## Concept Understanding



You have learned to graph function rules by making a table of values. You can also use a graphing calculator to graph function rules.



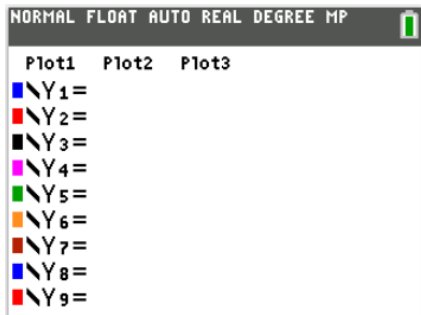
## Example

#1 Graph  $y = \frac{1}{2}x - 4$  using a graphing calculator.

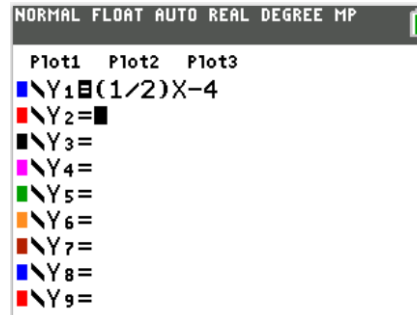


**Step 1.** Press the

STATPLOT F1

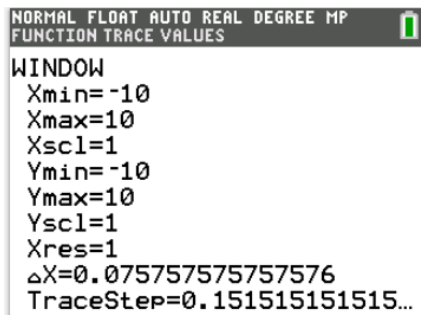


**Step 2.** To the right of Y<sub>1</sub>



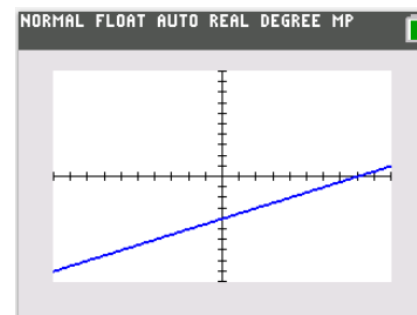
**Step 3** Press the **WINDOW** key that lets you look at only part of the graph. A good window for this function rule is the standard viewing window,  $-10 \leq x \leq 10$  and  $-10 \leq y \leq 10$ .

TBLSET F2



**Step 4** Press the **GRAPH** key. The graph of the function rule is shown.

TABLE F5





# Example

#2 Solve  $7 = -\frac{3}{4}k + 3$

**Step 1.** Press the **STATPLOT F1** **Y=**

Clear any equations.

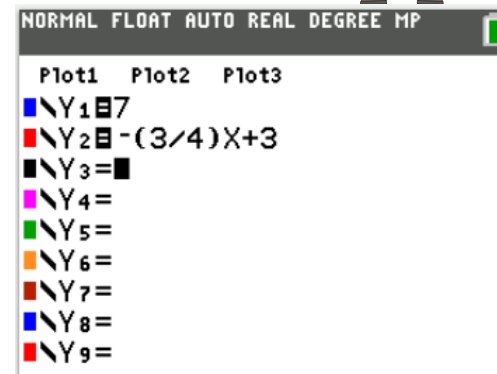
Then enter each side of the given equation.

For **Y<sub>1</sub>**, enter

**u 0** **ENTRY SOLVE**  
**7** , then **ENTER**

For **Y<sub>2</sub>**, enter  $-\frac{3}{4}k + 3$

**ANS ? 4** **{ K** **L3 0** **e M** **L4 T** **} L** **LINK** **MEM "** **L3 0** **ENTRY SOLVE**  
**(-)** **(** **3** **÷** **4** **)** **X,T,θ,n** **+** **3** **ENTER**

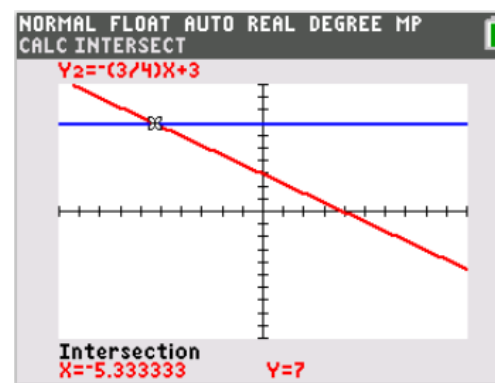


**Step 2** Graph the function rules. Use a standard graphing window by pressing **FORMAT F3** **ZOOM**, then **6: ZStandard**. This gives a window defined by  $-10 \leq x \leq 10$  and  $-10 \leq y \leq 10$ .

**Step 3** Use the CALC feature. Press **CALC F4** **2ND** **TRACE** Select **5: intersect** and press **ENTRY SOLVE** **ENTER** 3 times.

The calculator's value for the x-coordinate of the point of intersection is -5.333333.

The solution of  $7 = -\frac{3}{4}k + 3$ , is  $-5\frac{1}{3}$



## Practice and Problem Solving Exercises

Graph each function rule using a graphing calculator.

1.  $y = 6x + 3$

2.  $y = -3x + 8$

3.  $y = 0.2x - 7$

4.  $y = -1.8x - 6$

5.  $y = -\frac{1}{3}x + 5$

6.  $y = \frac{8}{3}x - 5$

7. Open-Ended Graph  $y = -0.4x + 8$ . Using the window screen, experiment with values for Xmin, Xmax, Ymin, and Ymax until you can see the graph crossing both axes. What values did you use for Xmin, Xmax, Ymin, and Ymax?

8. Reasoning How can you graph the equation  $2x + 3y = 6$  on a graphing calculator?

Use a graphing calculator to solve each equation.

9.  $8a - 12 = 6$

10.  $-4 = -3t + 2$

11.  $-5 = -0.5x - 2$

12.  $4 + \frac{3}{2}n = -7$

13.  $\frac{5}{4}d - \frac{1}{2} = 6$

14.  $-3y - 1 = 3.5$