



# TI-73 EXPLORER™

## 7<sup>TH</sup> GRADE ACTIVITY 11:

### SLOPE CHALLENGE

#### ACTIVITY OVERVIEW:

In this activity we will

- Draw and compare line segments with different slopes
- Use the line function in the DRAW menu

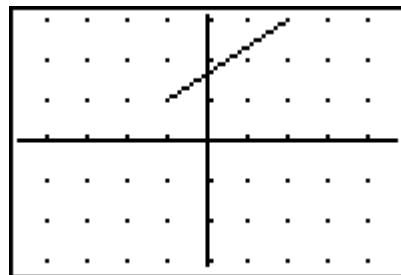
The slope of a line or line segment is a RATIO of the vertical change of the line or line segment as compared to the horizontal change.

To set up the calculator to draw line segments, first press **2nd** **[FORMAT]** and set your screen like the one on the right. Use the up, down and left, right arrow keys to move and then select items by pressing **ENTER**

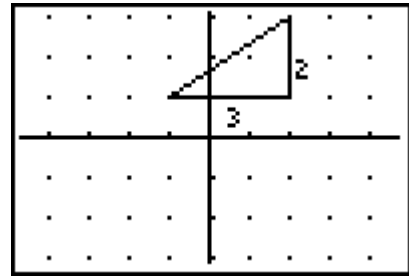


Press **CLEAR** and make sure there are no functions graphed by pressing the **Y=** key and clear any functions. Then press **ZOOM** and select Zdecimal and press **ENTER**.

Now you will draw a line with a slope of  $\frac{2}{3}$ . From the graph screen, press the **DRAW** key and select 2:Line(. Arrow until your cursor is at (-1,1). Press **ENTER**. Then, use the arrow keys to move the cursor to (2,3) Press **ENTER** again. Then press **CLEAR**. Your screen should look like the one at the right. Draw the vertical and horizontal change to form a triangle with the line segment

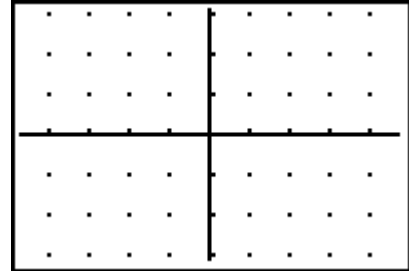


Your challenge is to draw the slopes given in each problem on the calculator. Then, draw your segment on the graph at the right of each problem. Again, show the horizontal and vertical change on your graph on the paper and label them. The problem above would now look like this. Press **DRAW** and 1: ClrDraw to remove the previous problem

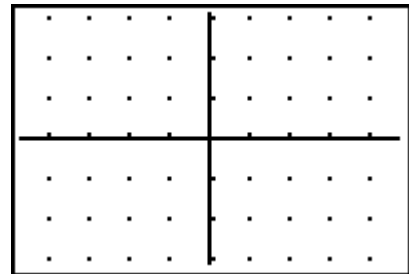


You get to decide where your line segment begins and ends for each problem.

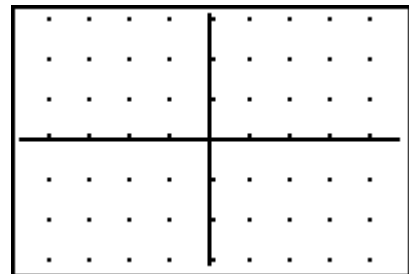
Slope of segment =  $-3/4$



Slope of segment =  $5/2$



Slope of segment =  $1/3$



Slope of segment = 0

