Section 3.4: Slope-Intercept Form of a Line &
Section 3.5: Point-Slope Form of a Line

MATH 102 Course Outline Unit IV

Objectives: Determine appropriate window settings on a graphing utility.
Graph equations using a graphing utility.

In these sections, students may use the graphing calculator to verify hand-drawn graphs. There are no new graphing calculator skills to introduce, so you may refer to section 3.2 to review how to graph equations on the calculator.

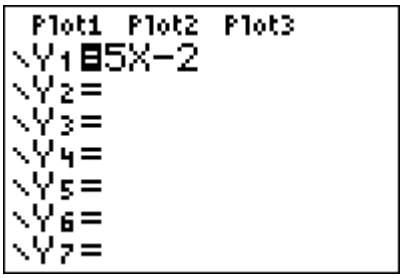
Instructor Notes:

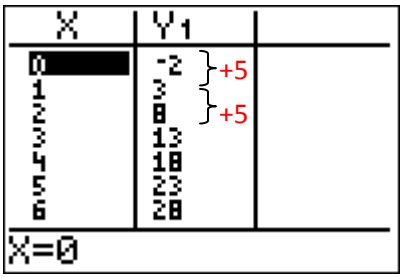
1. Remind students that they must get the equation into slope-intercept form in order to graph on the calculator.

2. Have students verify/observe that a line rises left to right if it has a positive slope, falls left to right if it has a negative slope, and is horizontal if it has a slope of 0.

3. Show how slope is illustrated in the **TABLE**: for every increase of __ in x, there is a change of __ in y. Integer slopes will be easiest for students to see.

   For example, enter y = 5x – 2.





4. You may also want to ask students to identify the y-intercept from the slope-intercept form of the equation and then how they can verify this in the table and on the graph.

5. Point out that the graphing calculator cannot graph linear equations in the form x=c. (In chapter 8 students will learn about functions and you can give more info as to why not.)

6. You may want to do an example of an applied problem such as ***Classroom Example 7*** on p. 215 that requires students to consider an appropriate viewing window.

   a. Discuss whether cholesterol and age can be negative.

b. Discuss reasonable values for maximum age.

c. Y-intercept is 157 and slope is positive, so we need to go above 157 on y-axis.