Section 8.1: Graphs of Equations
MATH 102 Course Outline Unit IV
      Objectives: Generate ordered pair solutions for equations in two variables.
                   Graph equations by plotting generated ordered pair solutions.

As students are already familiar with graphing linear equations, the focus in this section is on non-linear equations. ***Exercises 77-84*** ask students to use the graphing calculator to generate graphs of non-linear equations. There are no new graphing calculator skills to introduce.

Instructor Notes:

1.   You may discuss how using slope-intercept form of a line is a useful way of graphing linear equations but that this doesn't apply to non-linear equations. The intercept method won't work either because, while only two points are needed to graph a line, more points are needed to graph many non-linear equations.

2.   The assignment for this section includes quadratic, cubic, and absolute value functions, so we may want to show a few examples of these graphs either on the calculator or on the board to illustrate why only two points would not give a complete graph.

3.   So, at this point (without any further knowledge of non-linear functions), we must use the point-plotting method to graph non-linear equations, and we must plot several points in order to see the general shape of the graph.

4.   Students may use the graphing calculator to help generate points and see the general shape of the graph. (See Graphing Calculator Guide Section 3.2-3.3.) The instructions for Exercises 77-84 instruct students to "Use the TABLE feature to assist in selecting an appropriate viewing window," so you may want to demonstrate this.