# Graphing More Than One Function Classic View

# Objectives:

- Use and pronounce subscript notation
- Set MODE to graph two or more functions sequentially
- Graph more than one function in the Y= menu
- Set MODE to graph two or more functions simultaneously
- Turn graphs on and off without deleting them from the Y= menu

#### Use and pronounce subscript notation

Subscripts, written below the line, are often used in math for a list of similar items. **Example 1:** The 1 in  $y_1$  is a subscript, and  $y_1$  is pronounced "y-sub-one".

The Y= menu uses subscript notation to identify each function. The GC will graph up to ten functions,  $y_1$ ,  $y_2$ , ...  $y_9$ ,  $y_0$ .

# Set MODE to graph two or more functions sequentially





**PRO TIP:** Use sequential graphing (in order  $y_1, y_2, \dots, y_9, y_0$ ) if you don't know how the functions look.

#### Graph more than one function in the Y= menu





## Set MODE to graph two or more functions simultaneously

It can be quicker to graph functions simultaneously (all at once), rather than sequentially (one at a time.)



## Turn graphs on and off without deleting them from the Y= menu

**KEY CONCEPT:** Pressing ENTER when the cursor is on the = symbol unselects (or re-selects) that graph!



# Try It!

- 1) Graph  $y_1 = 3x 7$  and  $y_2 = -x^2 + 4$  simultaneously, in the standard window.
- 2) Graph  $y_1 = 3x 7$  and  $y_2 = -x^2 + 4$  sequentially, in the standard window.
- 3) Graph  $y_1 = 3x 7$  and  $y_2 = -x^2 + 4$ , then turn off the graph for  $y_1$  and graph only  $y_2$ .
- 4) Turn off the graph for  $y_2$  in the previous question and graph only  $y_1 = 3x 7$
- 5) Graph  $y_1 = 2x^2 + 3x + 1$ ,  $y_2 = 2x^2 + 3x 1$ ,  $y_3 = 2x^2 + 3x + 4$  and  $y_4 = 2x^2 + 3x 4$  in the same window. Try sequential versus simultaneous, and turning graphs on and off.

# Solutions:

