Calculator Basics 3 Name_____

Find the maximum value of $f(x) = x - x^2$, over $[-1, 2]$

Go to **GRAPH**

Enter the function *f* using the *x* variable key

$$Y_1 = x - x^2$$

You may use a **ZOOM STANDARD** or **ZOOM FIT** then adjust the viewing window as needed.

In the **GRAPH** editor, select **WINDOW**, the following screen will appear

WINDOW
xMIin= Here enter the left end point of the interval
xMax= Here enter the right end point of the interval
xScl=
yMin= Try some values here, then examine the graph to find a better viewing window.
yMax=
yScl=

Enter the domain values and, the range values in the appropriate space. If you can not find the range values, use a trial and error method.

Use the **TRACE** key in the **GRAPH** editor to display the value of *f* at *x*.

Go to **TRACE** then use the left and right cursor keys to trace the curve. The up and down cursors are used to switch between two curves in the graph editor. Use the **TRACE** key to estimate the maximum Value of *f*.

To obtain a better estimate of the maximum value of *f* use the **FMAX** key.

Go to **GRAPH MORE MATH FMAX**, then fill in the blanks as follow.

FMAX(Y_1, x, left end point, right end point). **ENTER**.

In some calculator, you can paste function names from **VAR Y-VARS FUNCTIONS**

For TI 86, type in y_1 Use **2nd ALPHA** 0 1**.**