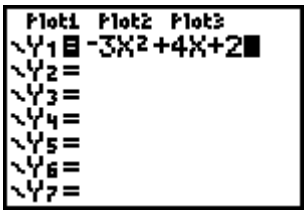
Calc Menu: maximum

Calculating a maximum value for a function using a graph.
We will use the rule $P(x) = -3x^2+4x+2$.

Keystrokes *Screen*

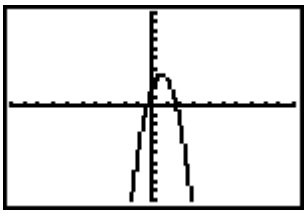
Enter the function into the equation editor:

[Y =] [(-)] 3 [X,T,θ,n] [x^2] [+] 4 [X,T,θ,n] [+] 2



Look at the graph:

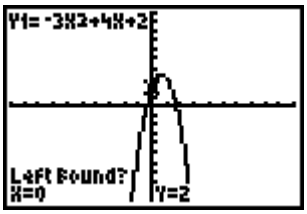
[GRAPH]



Note: you may need to adjust your WINDOW settings. We are using a standard viewing window here.

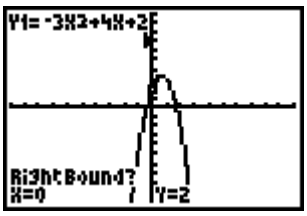
Select the calculate maximum feature:

[2nd] [TRACE] [4]



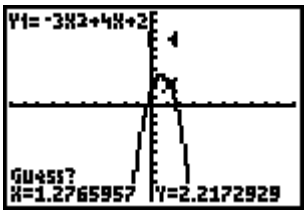
Note: if you have more than one function graphed, you may have to use the up and down arrows to select the proper function.

Left Bound? Use the ◄ or ► keys to locate a point on the left side of the maximum *y*-value and press [ENTER].



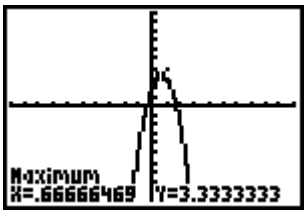
Note: if there is more than one maximum, make sure that your left bound is just to the left of the maximum you want.

Right Bound? Use the ◄ or ► keys to locate a point on the right side of the maximum *y*-value and press [ENTER].



Note: if there is more than one maximum, make sure that your right bound is just to the right of the maximum you want.

Guess? Use the ◄ or ► keys to locate the maximum press [ENTER].



Note: the x- and y-coordinates of the point are displayed on the bottom of the screen and marked with a blinking cursor.

Note: you may repeat the process for other local maxima.

More questions? Contact the **Metropolitan State University Math Center** at 651-793-1460, 651-793-1463 (Fax) or math.center@metrostate.edu.

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