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Use a graphing calculator to find the zeros and extrema. Identify extrema as abs./rel. max./min. Round to 2 decimal places.

1.) $b(x) = -2x^3 + 5x^2 + x$

2.) $c(x) = x^5 + 12x^2 - 7$

3.) $g(x) = -3x^4 - 3x^3 + 10x^2 + 10x + 8$

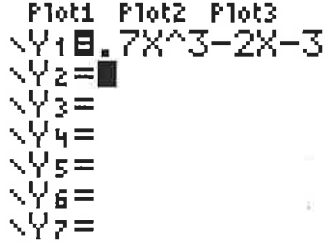
4.) $h(x) = 3x^3 + 5x^2 - 8x - 2$

5.) $p(x) = (x+2)(x-5)(x+4)$

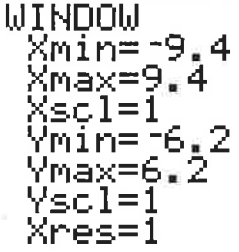
6.) $m(x) = -(x-1)(x+2)(x+3)(x-2)$

TI-84 Calculator Using Maximum, Minimum, and Zero tools

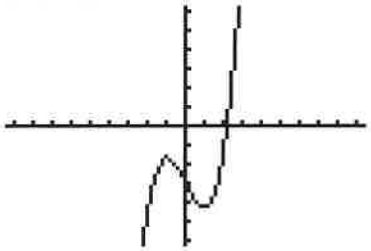
Try the function below:



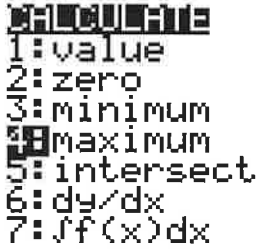
Make the "friendly window" the one that emulates the screen dimensions.



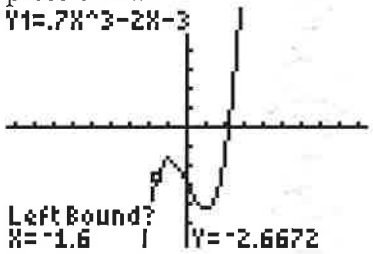
It should look like this.



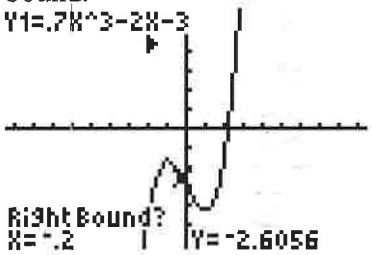
Press "CALCULATE" and select Maximum. This is the tool that can help locate local maximums, like the bump on the left hand side of this graph.



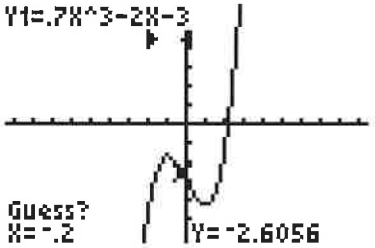
The calculator will prompt you for 2 things in each of these examples; a left bound, that is a point to the left of desired point and a right bound. When you move the cursor to a point to the left of the maximum, press enter.



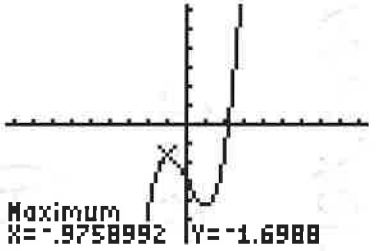
Do the same for the right bound.



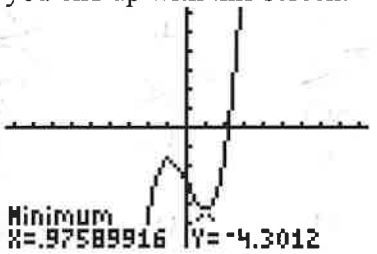
Then, it asks you to "guess." I usually skip this part, but must press enter.



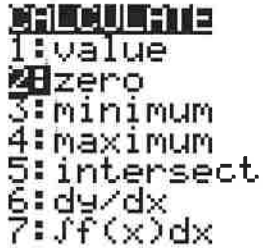
The result will be a local maximum, like -.9758992 below.



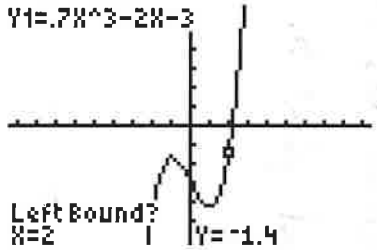
The steps for the local Minimum are the same. See if you end up with this screen.



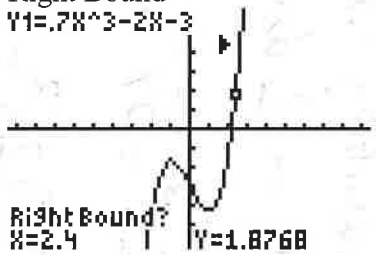
A Zero is a place where the graph crosses the x-axis. If there are more than one, you have to do them one at a time. The progression of steps is the same as Maximums and Minimums.



Left Bound.



Right Bound



A guess, then the answer. 2.19341