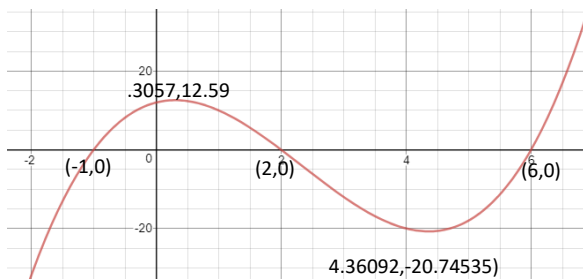Advanced Algebra

Unit 5: Polynomial Functions ASSIGNMENT #2

Use your calculator to help you:

   a) Make an accurate sketch of the function
   b) Locate the Maximum (Calc #4)
   c) Locate the Minimum (Calc #3)
   d) Locate the Zeros (Roots) (Calc #2)
   e) Write the given function in FACTORED form.

Example from what we talked about yesterday:

$y=x^3-7x^2+4x+12$

.3057,12.59
(-1,0)
(2,0)
(6,0)
4.36092,-20.74535)

My first step was to enter the function into my calculator. I adjusted my y min and y max and x min and x max until I could see the whole feature.

Y intercept- VARS(0) = 12

b) Max 2nd Calc- #4 (.3057, 12.59)

c) Min 2nd Calc#3 (4.36092, -20.74535)

d) Zeros 2nd Calc #2 (6,0) (2,0)(-1,0)

e) Factored Form: y= (x-6)(x-2)(x+1)

You should be entering the function into your calculator and then adjusting the window until you can see the entire graph. You can then sketch the graph on your paper. You should label these points on the graph just as I did in the example problem and from our discussion yesterday.

1) $y=4x^3-28x^2+57x-36$

2) $y=x^3-5x^2-18x+72$

3) $y=2x^3-22x^2+28x+160$

4) $y=3x^3+3x^2-96x-180$

5) $y=2x^3-16x^2-56x+160$

6) $y=8x^3+16x^2-48x-64$