Bellwork Hon Alg 2 Monday, December 19, 2016

1. Graph this polynomial and state all Absolute and Relative Extrema, if any. Round to the nearest hundredth.

$y = -0.1x^4 - x^3 - 2x^2 + 4x + 6$

2. Find all Complex zeros, real and imaginary, by factoring.

a) $y = 2x^3 - x^2 + 18x - 9$

b) $y = 6x^7 - 30x^5 + 24x^3$

3. Find all real solutions by graphing. Round to the nearest hundredth.

$-x^3 + 26x^2 = 19x + 149.7$

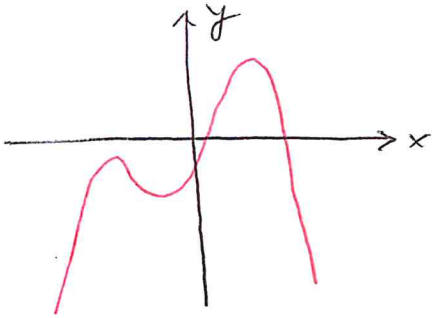
Bellwork Hon Alg 2 Monday, December 19, 2016 ANSWERS

1. Graph this polynomial and state all Absolute and Relative Extrema, if any. Round to the nearest hundredth.

$y = -0.1x^4 - x^3 - 2x^2 + 4x + 6$

ABS MAX: (.65, 7.46) Rel Max: (-5.21, -1.39)

ABS MIN: None Rel Min: (-2.94, -5.11)



2. Find all Complex zeros, real and imaginary, by factoring.

a) $y = 2x^3 - x^2 + 18x - 9$

	2x	-1
x^2	$2x^3$	$-x^2$
+9	+18x	-9

$(2x-1)(x^2+9) = 0$

$x = \frac{1}{2}, \pm 3i$

b) $y = 6x^7 - 30x^5 + 24x^3$

$6x^3(x^4 - 5x^2 + 4) = 0$

$6x^3(x^2-4)(x^2-1) = 0$

$6x^3(x\pm 2)(x\pm 1) = 0$

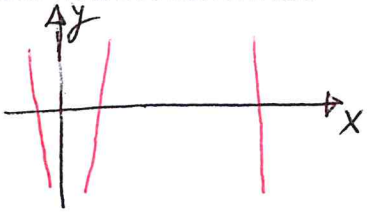
$x = 0, \pm 2, \pm 1$

4, -4, -1, -5

3. Find all real solutions by graphing. Round to the nearest hundredth.

$-x^3 + 26x^2 = 19x + 149.7$

$x = -2.00, 3.00, 25.00$



window
x [-10, 30]
y [-10, 10]