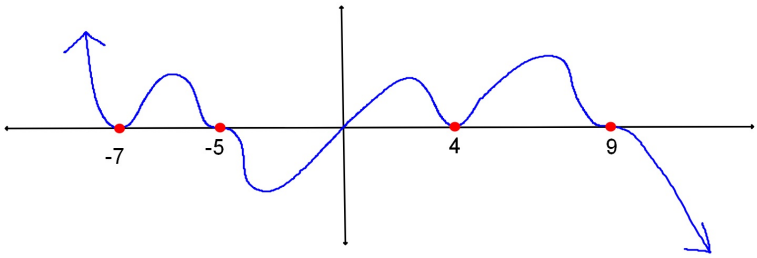
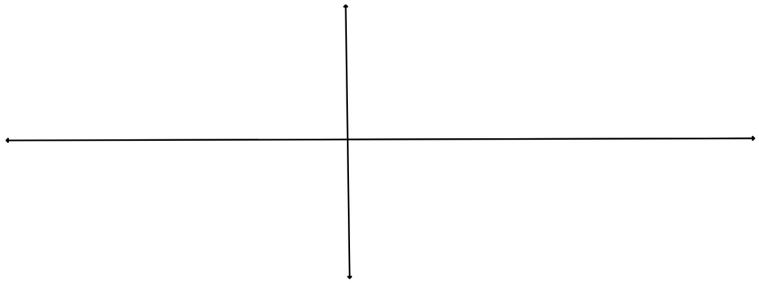
Alg 2 Bellwork Wednesday, December 4, 2013

1. Write a possible equation for this graph.

y =



2. Sketch the graph of this polynomial. $y = (x-3)^2(2-x)^3(x+6)(x+1)^2$



3. Find all Absolute Max and Min (if any), Relative Max and Min (if any), and real zeros of this polynomial.

$$y = -0.5x^3 + 0.5x^2 + 3x - 6$$

4. Is each of the below a polynomial?

a. $y = -\frac{2}{3}x^2 - 1.73x + 4$

b. $y = \frac{5}{x^4} + 4x^3 + 10x^2$

c. $y = 12x^2 - 6\sqrt{x} + 8$

5. 5 is a solution to this equation. Find the other three solutions.

$3x^4 - 17x^3 + 22x^2 - 68x + 40 = 0$

6.

Sum and Difference of Cubes

$$a^3 + b^3 = (a + b)(a^2 - ab + b^2)$$
$$a^3 - b^3 = (a - b)(a^2 + ab + b^2)$$

Quadratic Formula

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Find ALL solutions to this polynomial equation.

$125w^3 + 8 = 0$