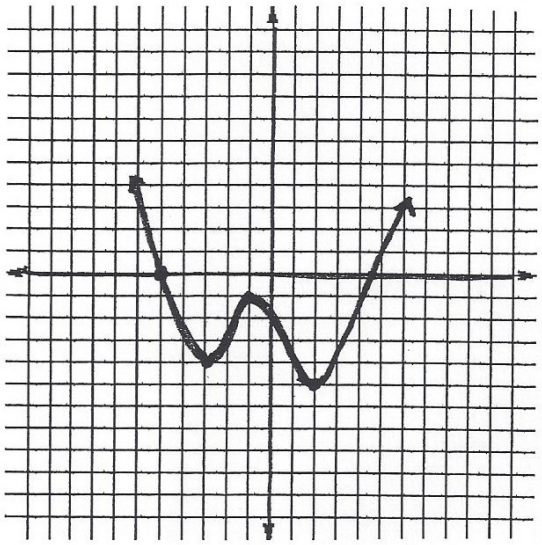
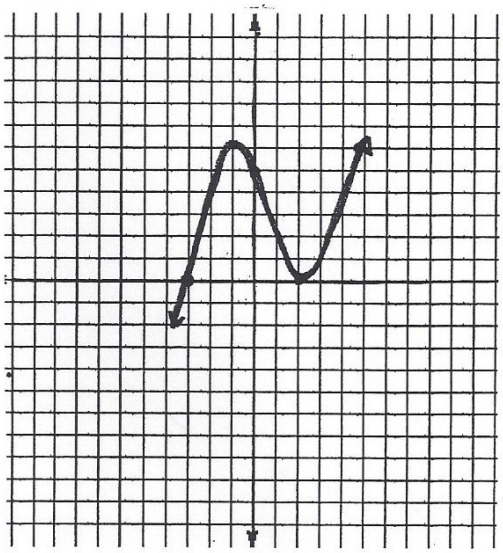
Test #3 Review **Name** _____
Pre- AP Algebra 2 **Class Period** _____

Tell me EVERYTHING you know about the following functions.

1)



2)



Divide using LONG DIVISION.

3) $(5x^4 + 18x^3 + 10x^2 + 3x) \div (x + 3)$

Divide using SYNTHETIC DIVISION.

4) $(2x^4 + x^3 - 5x - 6)(2x - 3)^{-1}$

Find ALL the roots for the following. (Be sure to tell/show me EVERYTHING.)

5) $f(x) = 2x^3 - 13x^2 + 17x + 12$

6) $f(x) = x^4 + 5x^3 + 15x^2 + 19x + 8$

7) $f(x) = x^3 + 4x^2 + 4x + 1$

Graph the following.

8) $y = -x^3 - 4$

9) $f(x) = 2(x + 3)^3$

10) $f(x) = \frac{1}{2}(x - 2)^3$

11) $y = (x + 3)^3 + 1$

Solve each equation.

12) $x^4 - 8x^2 + 16 = 0$

13) $r + 9\sqrt{r} = -8$

14) $x^{\frac{2}{3}} - 9x^{\frac{1}{3}} + 20 = 0$

15) $a^3 - 64 = 0$