PAP Algebra 2 **Name:**_____

Sec. 4.3 Skills Practice WS

For #'s 1-5, you are given factored form.

a. Determine the roots of the cubic equation and their multiplicities.
b. Determine the end behavior.
c. Sketch the graph without a calculator. Label any relative maximums and/or relative minimums.

1. $y = (2x - 1)(2x + 1)(x + 4)$

2. $y = (10 - 3x)(7 + x)(8 + 6x)$

3. $y = (4x - 7)^3$

4. $y = 3x(x + 3)(x - 2)$

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

For #'s 6 - 9

a. Write the equation in factored form.

b. Determine the roots of the cubic equation and their multiplicities.

c. Write the equation in standard form.

d. Determine the end behavior.

e. Sketch the graph without a calculator. Label any relative maximums and/or relative minimums.

6. $y = (2x - 9)(4x^2 - 13x - 12)$

7. $y = (4x^2 - 9)(x + 1)$

8. $y = (x + 4)(x^2 - 6x + 9)$

9. $y = (2x - 1)(x^2 + 5x + 6)$

For questions 10 – 11, you are given the roots of a cubic.
a. Write an equation in factored form.
b. Sketch a graph that could represent a cubic function with those roots without a calculator. Label any relative maximums and/or relative minimums.

10. roots of 2, -3, and 5.

11. roots of $\frac{1}{2}, \frac{-3}{4}, and\ \frac{1}{3}$.