Math 093   Sample Test Chapter 12

In problems 1- 7, simplify:

1.) $(-5y) \cdot (-2y^6)$

2.) $4x^3(2x-5)$

3.) $(3x^2 - 6xy + 3y^2) - (2x^2 - xy + 5y^2)$

4.) $\dfrac{30x^4 - 15x^3 + 5x}{15x^3}$

5.) $2^0 + 5^0$

6.) $(-3x^4)^2$

7.) $\dfrac{8x^9 y^7}{16x^3 y^2}$

8.)   Find the area of the rectangle (simplify your answer). Length is 4-3x and the
        width is 3-2x.

9.)   Evaluate the polynomial $2x^2 - 2x - 5$ when x = -3.

In problems 10 – 13, simplify:

10.) $(2x+5)^2$

11.) $(3x - 2y)(3x + 2y)$

12.) $(x^2 - 2)(3x^4 + 2x^2 + 5)$

13.) $4x^2 + 4x - 6x^2 + 11 - 7x$

14.) Convert:
        a.) 111.2×10^{-5} to decimal notation   b.) 6,200,000 to scientific notation

In problems 15-16, simplify (write your answer with only **positive** exponents):

15.) $\dfrac{x^{-8}}{x^{-3}}$

16.) $\left(\dfrac{2x^{-2} y^3}{3x^{-4} y^{-9}} \right)^{-3}$