Algebra 1 Name_____

WS PC #1 Review (7.1 - 7.3)

Find each product. Write your answer in standard form. Then, classify the polynomial and state the leading coefficient.

1) $(2n+8)^2$

2) $(8r-4)(8r+4)$

3) $(8a+8)(7a+2)$

4) $(4r+7)(5r^2-r+1)$

Simplify each expression. Write your answer in standard form. Then, classify the polynomial and state the leading coefficient.

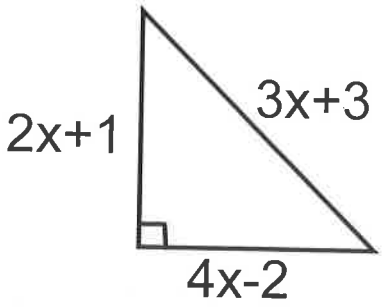
5) $(n^2-8n-7)-(5n^4-6n^2+3n)$

6) $(8n^3+3n^2)-(4n^3-8n-5)+(8n^3-n)$

7) A rectangle has a length of $3x^2-2x+1$ and a width of $2x^2+5x$. Write a polynomial expression to represent the perimeter of the rectangle and write an expression to represent the area of the rectangle.

8) A square has side lengths of $4x-3$ units. Write a polynomial expression to represent the perimeter of the square and write an expression to represent the area of the square.

9) Using the triangle, write a polynomial expression to represent the perimeter and write a polynomial expression to represent the area. (Remember: $A = \frac{1}{2}b \cdot h$)



10) A triangle has side lengths of $2x + 3$, $3x - 7$, and $x + 1$. If the perimeter of the triangle is 27 inches, find x.

The equation $h = -16t^2 + v_0t + s_0$ represents the height of a falling object, where t represents time in seconds, v_0 represents the initial vertical velocity in feet per second, and s_0 represents the initial height in feet.

11) A basketball is thrown down from the window of a building 180 feet tall with an initial velocity of 20 feet per second.

a) Write a polynomial that represents the height of the object.

b) Find the height of the object after 1 second.

12) Another basketball is thrown up from the ground. The polynomial $-16t^2 + 25t + 5$ represents the height of the basketball after t seconds.

a) What is the initial vertical velocity of the ball? What is the initial height?

b) Write a polynomial to represent the distance between this ball and the ball from the previous question after t seconds.