

Name: _____
Date: _____
Class: _____

Algebra
Unit 7
HW 7-1

1) Put in standard form: $14x^2 - 8x^4 + 10x - 8 + 6x^6 - x^5$

2) Simplify: $(10x^2 - 8x - 7) + (10 - 6x^2 + 8x)$

3) Simplify: $(x^2 - 7x - 10) - (18x - 19 + 4x^2)$

4) Simplify: $(4x^2 + 6x - 3) - (3x^2 + 2x + 4)$

- 5) A box has a width that is 2 inches greater than its height and a length that is 6 inches greater than its height. Its volume is given by the polynomial expression $x^3 + 8x^2 + 12x$, where x is the box's height. What is the box's volume, in cubic inches, if its height is 10 inches?

6) Simplify: $2(4x^3 - 2x^2 - 6) - (6x^3 + 2x^2 - 8x - 10) + 4x^2 - 2(3x^2 - 4x + 7)$

7) If the perimeter of a triangle is represented by $2x^2 - 7x + 9$ and a square has a perimeter represented $3x^2 + 8x - 3$. What is the difference between the square and the triangle?

8) If a rectangle has an area represented by $6x^2 - 8x + 12$. If you take half of this area, subtract $10x - 7$, and then combine it with $10x^2 - 18$, what would the resulting area be?