Unit 6 Module B Notes Sections 18.4 – 18.7; 19.1 – 19.2
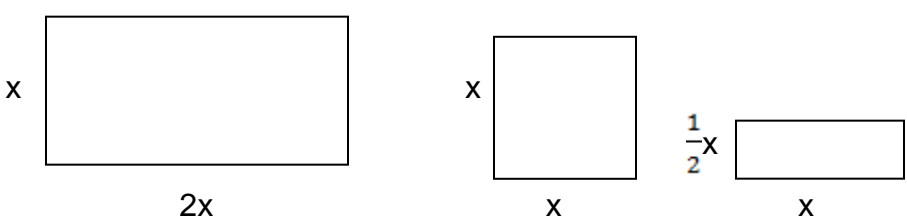
View the PowerPoint, Videos, or Textbook for Module 6B.

<u>Vocabulary</u> *Fill in the blanks.*

1. (Section 18.4) To find the additive inverse of a polynomial, change the _____ of each term or multiply by –1.

2. (Section 19.1) A _____ of a polynomial is an expression that names that polynomial as a product.

3. (Section 19.1) The largest factor that is common to each of several terms is called the

   _____ _____ _____.

4. (Section 19.1) Certain polynomials with four terms can be factored using this method

   _____ _____ _____.

5. (Section 19.2) A polynomial that cannot be factored further is said to be _____.

<u>Problems</u> *Show ALL steps.*

1. (Section 18.4) Find a polynomial for the **sums** of the
   a. Perimeters and (hint: find the perimeter of each rectangle, add the perimeters, and simplify the polynomial)
   b. Areas (hint: find the area of each rectangle, add the areas, and simplify the polynomial) of the rectangles.

x ▭ 2x   x ▭ x $\frac{1}{2}x$ ▭ x

1) P= _____ A= _____   2) P= _____ A= _____   3) P= _____ A= _____

Total Perimeter= _____   Total Area= _____

2. Section (18.5) Multiply. $(-3x)(x-4)(-x+1)$

3. (Section 18.6 and 18.7) Multiply using special product rules.

   a. $(x-4)(x+4)$

   b. $(x+4)^2$

4. (Section 19.1) Factor by grouping. $2x^3 - 6x^2 - x + 3$

   Underline the common binomial factor when you factor by grouping. Also check your answer by multiplying the factors.

5. (Section 19.2) Factor. $18 + 7x - x^2$

   Also, List the product of the factors and the sum of the factors. (hint: factor out -1 first)