Algebra 1
Unit 1 lesson 5 Notes
Finding the GCF and LCM for a Set of Monomials

Essential Question: How do I find the greatest common factor and/or least common multiple for a set of monomials?

Vocabulary:

Factor:	Multiple
4 x 7 = 28 (x + 4)(x + 1) = x^2+5x+4	

Finding the Greatest Common Factor (GCF)

Steps:
1. List all factors of each number.
2. Find the greatest factor they have in common

*For larger #'s, you may want to find the prime factorization instead. Use the smallest exponent on like terms and multiply them together.

Examples: Find the GCF
1. 28, 14
2. 20, 30
3. 180, 600

What about variables?

Use the smallest exponent on like terms and multiply them together!

Examples: Find the GCF

1. x^2, x^4
2. $6x^2, 9x^4, -12x^5$
3. a^5b^4, a^2b^3c

Finding the Least Common Multiple (LCM)

Steps:

1. List all factors of each number

2. Find the greatest one they have in common

*For larger #'s, you may want to find the prime factorization instead. Multiply the factors, using each common prime factor only once – if a number occurs more than once, use the one with the larger exponent)

Examples: Find the LCM

1) 20, 15

2) 32, 4

3) 18, 27

What about variables?

Multiply the factors, using each common prime factor only once – if a number occurs more than once, use the one with the larger exponent)

Examples: Find the LCM

1) $12x^2y^3$, $16xy^2$

2) $6xy^3z^4$, $8xz^2$

3) $2x^2$, $3y$, $4xz^2$