Lesson FE - 2

Objective: Factoring out the GCF of an Expression

Homework FE-2 – NYA p.501 #1, 4, 7, 13, 16, 19, 21, 22, 27, 30, 38

Do Now: Find the GCF of the following

1. 10, 16, 40
2. $6x, 24x, 30x$
3. $y^2, -10y^2, 12y^2$

Exam Prep: Which binomial has no GCF?

A) $7x^2 - 14x$ B) $-2x + 40y^2$ C) $y^4 + 2y^7$ D) $14x^2 + 42$

MORE REVIEWING IS IMPORTANT BEFORE BIGGER THINGS

Keep thinking that this is all the DISTRIBUTIVE PROPERTY

Multiplying a Monomial by a Polynomial: Distributive Property

1. $2x(3x^2 - x)$	2. $4(2y^3 + 5y - 1)$	3. $-x(2 + 3x)$
4. $5x^2(-3x^3 + 6x + 1)$	5. $-10(-10g - 2)$	6. $4x^3(9x^5 + 2x^2 + 6)$

Factoring Polynomials

Find the GCF and Factor the Polynomial: $12x^4 - 20x^2 + 8x$

Step 1: Find GCF		Step 2: Factor out GCF
$12x^4$:	$3 \cdot 4 \cdot x \cdot x \cdot x \cdot x$	$12x^4 - 20x^2 + 8x$
$-20x^2$:	$-1 \cdot 4 \cdot 5 \cdot x \cdot x$	$4x(3x^3) + 4x(-5x) + 4x(2)$
$8x$:	$2 \cdot 4 \cdot x$	$4x(3x^3 - 5x + 2)$
GCF =	$4x$	

Practice: Find the GCF

1. $15x^5 - 10x^3 + 40$	2. $8z^4 + z^7$	3. $-6x^2 - 3x$

Practice: Factor Out a Monomial (GCF)

1. $35y^6 + 10y^2 – 5y$	2. $8z^2 – 8z + 8$	3. $15x^4 + 7$
4. $–20p^2 – 6p$	5. $3x^3 + 2x^2 – x$	6. $40x^9 + 20x^5 + 5x^2$