

Unit 1: Algebra Skills

Topic: Factoring Expressions

Objective: *SWBAT completely factor various expressions by using the greatest common factor(s).*

Warm Up #3:

Explain in your own words (☺BE SPECIFIC) how you would factor:

$$3x^2y^5 - 12x^8y^3$$

Factoring Polynomials is the _____ of Multiplying polynomials.



The first thing you _____ do is look for the _____
_____.

The GCF is the _____ that all the terms have in common.

BEWARE...

of the GCF's in _____.



The next thing to look for are any _____
including the _____ or
_____.

$$a^2 - b^2 =$$

$$a^3 - b^3 =$$

$$a^3 + b^3 =$$

Example(s):

a) $x^3(3x + 1) - 5(3x + 1)^2$	b) $5a^2b^4 - 45a^6$
c) $\frac{1}{8}x^3 + 1$	d) $p^2(64 - p^2) - (64 - p^2)$

Problem Set #3: Factor each of the following expressions using the appropriate method.

1) $x^2(3x + 1) - 3(3x + 1)$	2) $7x(x - 3) - 4(3 - x)$
3) $3(x - 1)^2 - 12$	4) $35c^4d^4 - 28c^3 + 42cd^8$

5) $2x^3y^3 - 686$	6) $2(x + 1)^2 - 8y^2$
7) $2abc - 2ad + a(bc - bd)$	8) $2(5x - 2)^3 - (5x - 2)^4$
9) $10w^3 + 2w^2 - 10wx^2 - 2wx^2$	10) $y^2(y - x) - 4(x - y)$
11) $(a + b)(a - b) + a(a + b)$	12) $-27x^3 + 1$
13) $3(2x + 1)^2 + (8xy + 4y)$	14) $121x^2 - 64y^4$

