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:

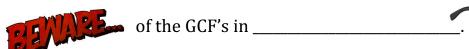
$$3x^2y^5 - 12x^8y^3$$

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.



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) $35c^4d^4 - 28c^3 + 42cd^8$

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 $6) \ 2(x+1)^2 - 8y^2$

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) $121x^2 - 64y^4$