WARM-UP...

Factor each of the following...

a) $x^2 - 13x - 30$

$(x-15)(x+2)$

M -30
A -13
N -15 2

b) $4x^2 + 17x + 15$

$4x^2 + 12x + 5x + 15$
$4x(x+3) + 5(x+3)$
$(x+3)(4x+5)$

M 60
A 17
N 12 5

c) $16x^2 - 24x + 9$

$16x^2 - 12x - 12x + 9$
$4x(4x-3) - 3(4x-3)$
$(4x-3)^2$

M 144
A -24
N $-12, -12$

Sep 23-12:39 PM

IV. Difference of Squares:

Conjugate: Same binomials except opposite signs between the terms.

Multiply the conjugates shown below...

$(x+3)(x-3)$

$x^2 - 3x + 3x - 9$

$x^2 - 9$

$(5w-4)(5w+4)$

$25w^2 + 20w - 20w - 16$

$25w^2 - 16$

$(4ab-c)(4ab+c)$

$16a^2b^2 + 4abc - 4abc - c^2$

$16a^2b^2 - c^2$

Is there a pattern when a binomial gets multiplied by it's conjugate?

Oct 16-10:40 PM

1

I. Difference of Squares

Criteria...
- two terms that are perfect squares.
- must be a difference
- factor like this...

$$a^2 - b^2 = (a+b)(a-b)$$

EXAMPLES...

1) $81x^2 - 16$

$(9x-4)(9x+4)$

2) $196x^2 - 49$

$(14x-7)(14x+7)$

3) $8x^2 - 18y^2$

$2(4x^2-9y^2)$

$2(2x+3y)(2x-3y)$

4) $81z^4 - 625$

$(9z^2+25)(9z^2-25)$

$(9z^2+25)(3z+5)(3z-5)$

Sep 10-10:05 AM

Let's make things slightly more complicated...

Factor each of the following:

$$16-(a-b)^2$$

$[4+(a-b)][4-(a-b)]$

$(4+a-b)(4-a+b)$

$$(a^2+12)^2-64a^2$$

$[a+12+8a][a+12-8a]$

$(9a+12)(-7a+12)$

$3(3a+4)(-7a+12)$

Oct 19-12:20 PM

HOMEWORK...

Puzzle Worksheet - Difference of Squares.pdf

Multiply:

I $(a + 5)(a - 5)$ $= a^2 - 25$

D $(2 + 3a)(2 - 3a)$ $= 4 - 9a^2$

Factor:

S $x^2 - y^2$ $(x + y)(x - y)$

I $4x^2 - 49y^2$ $(2x + 7y)(2x - 7y)$

Mar 10-11:39 AM

Attachments

Puzzle Worksheet - Difference of Squares.pdf