Welcome! Please grab your ISN and have a seat!

1. Title page 62 in your ISN as DO NOW 10/16-10/20
2. Split page 62 into 3 sections and complete the following DO NOW in the top section.

Multiply the given polynomials

1) $3a^3(8a+b)$

$24a^4+3a^3b$

2) $-y^2(-8x^2-6xy-y^2)$

$8xy^4+6xy^3+1y^4$

3) $(5x+2)(7x-2)$

$35x^2-10x+14x-4$

$35x^2+4x-4$

Oct 15-8:18 AM

WWK page 44

Add these words below binomial

trinomial: polynomial with three terms

x^2+4x-5

leading coefficient: number in front of the term with the highest degree.

$1x^2+4x-5$

leading coefficient: 1

Oct 15-8:19 AM

TOC 63 Factoring Trinomials

* How to factor.... when a = 1

Example

$x^2 + 7x + 6$

$7 = 1 + 6$ $\quad -1 + -6 = -7$

$5 = 2 + 3$ $\quad -2 + -3 = -5$

$(x+1)(x+6)$

Steps

1. Find all (+) & (-) factors of the last #.
2. Add all the factors to find the pair that adds to the middle #.
3. Write 2 parenthesis with those 2 #'s (factors)

Oct 15-8:21 AM

TOC 63 Factoring Trinomials

Factoring Polynomials When...

The leading coefficient is >1.
The degree is 2
There are 3 terms

$ax^2 + bx + c$ $\quad a \cdot c$

Steps for factoring success
1. SLIDE (multiply a·c → put at top of x)
2. DIVIDE (each # divide by a) (leading coefficient)
3. BOTTOMS UP (pull the bottom of each fraction infront of x)

$7 \cdot 4 = 28$

$1 \quad 28 \quad 29$

$1 + 28 = 29$ $\quad -1 + -28 = -29$ $\quad 2 + 14 = 16$ $\quad -2 + -14 = -16$

$4 + 7 = 11$ $\quad -4 + -7 = -11$

$7x^2 + 29x + 4$

$(x + \frac{1}{7})(x + \frac{28}{7})$

$(x + \frac{1}{7})(x + 4)$

$(7x+1)(x+4)$

Oct 20-8:29 AM

Ex 1 pg 64

Example

$p^2 - 4p - 45$

1 45
3 15
5 9

1 -45
3 -15
5 -9

$(p+5)(p-9)$

Steps

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Ex 2 pg 64

Example

$b^2 - 8b + 12$

$(b-6)(b-2)$

Steps

Oct 15-8:24 AM

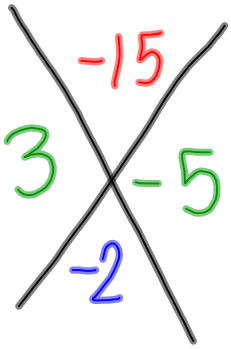
Ex 3 pg 64

$3p^2 - 2p - 5$

$(x + \frac{3}{3})(x - \frac{5}{3})$

$(x+1)(x - \frac{5}{3})$

$(p+1)(3p-5)$



$1 + -15 = -14$

$-1 + 15 = 14$

$3 + -5 = -2$

$-3 + 5 = 2$

Oct 20-8:31 AM

Ex 4 pg 64

$2n^2 + 3n - 9$

$(n - \frac{3}{2})(n + \frac{6}{2})$

$(n - \frac{3}{2})(n+3)$

$(2n-3)(n+3)$

Oct 20-8:31 AM

HW:

Factor the given trinomials

5) $x^2 - 7x - 8$

6) $k^2 + 4k - 5$

7) $a^2 + 14a + 48$

8) $n^2 - 15n + 50$

9) $p^2 + 4p + 4$

10) $x^2 - 6x - 27$

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Copy and the following in the second section on page 62

1) $x^2 - 8x - 9$

$(x-9)(x+1)$ 1 9 $-9+1=-8$

3 3 3 -3

2) $p^2 + 12p + 36$

$(p+6)(p+6)$

1·36 2·18 3·12 4·9 6·6

3) $n^2 - 7n - 18$

$(n+2)(n-9)$ -1 18

1 -18

2 -9

-2 9

3 -6

-3 6

4) $m^2 + 11m + 28$

$(m+4)(m+7)$ 28 -1 -2

14 -2 -14

$11=4+7$ -4 -7

Oct 15-8:48 AM

HW: Factor the given trinomials

1) $3n^2 - 8n + 4$

2) $5n^2 + 19n + 12$

3) $2v^2 + 11v + 5$

4) $2n^2 + 5n + 2$

5) $4n^2 - 15n - 25$

6) $5x^2 - 18x + 9$

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Welcome! Please grab your ISN and warmup and have a seat!

Factor each completely.

1) $7m^2 + 6m - 1$

2) $3k^2 - 10k + 7$

3) $2x^2 - 3x - 5$

4) $5x^2 - 14x + 8$

Oct 21-8:09 AM

HW: Factor the given trinomials

1. $x^2 + 8x + 16$
2. $x^2 - 16x + 64$
3. $y^2 + 12y + 36$
4. $a^2 - 10a + 25$
5. $16y^2 + 8y + 1$
6. $9x^2 - 6x + 1$
7. $25x^2 + 10x + 1$
8. $n^2 - 14n + 49$

Oct 21-8:13 AM

Oct 17-1:56 PM