

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

$$1) 3a^3(8a+b)$$
$$24a^4 + 3a^3b$$

$$2) -y^2(-8x^2 - 6xy - y^2)$$
$$8xy^2 + 6xy^3 + 1y^4$$

$$3) (5x+2)(7x-2)$$
$$35x^2 - 10x + 14x - 4$$
$$35x^2 + 4x - 4$$

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.

$$x^2 + 4x - 5$$

leading coefficient: 1

Oct 15-8:19 AM

TOC 63 Factoring Trinomials

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

Example

$$x^2 + 7x + 6$$

$$\begin{aligned} 7 &= 1 + 6 & -1 + -6 &= -7 \\ 5 &= 2 + 3 & -2 + -3 &= -5 \end{aligned}$$

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

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

$$ax^2 + bx + c$$

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 in front of x)

$$\begin{array}{cc} 7 \cdot 4 & \\ \cancel{28} & \\ 1 & 28 \\ & \cancel{29} \end{array}$$

$$7x^2 + 29x + 4$$

$$(x+1)(x+28)$$

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

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

$$\begin{aligned} 1 + 28 &= 29 & 4 + 7 &= 11 \\ -1 + -28 &= -29 & -4 + -7 &= -11 \\ 2 + 14 &= 16 \\ -2 + -14 &= -16 \end{aligned}$$

Oct 20-8:29 AM

Ex 1 pg 64

Example

$$p^2 - 4p - 45$$

Steps



Oct 15-8:24 AM

Ex 2 pg 64

Example

$$b^2 - 8b + 12$$

Steps



Oct 15-8:24 AM

Ex 3 pg 64

Oct 20-8:31 AM

Ex 4 pg 64

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

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

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

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

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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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

Nov 2-4:58 PM