ALGEBRA II
Chapter 5 section 4
Factor and Solve Polynomial Equations
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FOCUS:
How can you solve a higher - degree polynomial equation?

VOCAB:
*Factored Completely:*_____

_____

*Factor by Grouping:*_____

_____

*Quadratic Form:*_____

WARM – UP:

Multiply the polynomials

1. $(x + 2)(x + 3)$_____
2. $(2x + 1)(2x - 1)$_____
3. $(x - 7)^2$_____
4. $3x^2(x + 5)$_____
5. The dimensions of a box are modeled by $(x + 4)$, $(x + 2)$, and $(x + 6)$. Write a polynomial that models the volume of the box.

_____

NOTES:

Factor completely.

$y^3 - 4y^2 - 12y$ $3x^3 + 30x^2 + 75x$ $5g^5 - 80g^3$

SPECIAL FACTORS PATTERNS
SUM OF TWO CUBES
DIFFERENCE OF TWO CUBES

$27x^3 + 125$ $-2d^5 + 250d^2$

Factor the polynomial completely.

$27t^3 + 45t^2 - 3t - 5$

$x^3 + 7x^2 - 9x - 63$

$10x^4 - 10$

$3m^{12} + 54m^7 + 51m^2$

Find the real number solutions of the equations.

$2x^5 = 12x^3 - 16x$

$4x^5 - 40x^3 + 36x = 0$

Let's see if you comprehended what we worked on in class…

Try _____ for homework