

"Teacher"

Name

5/6

Date Th 4/26/17

Section 2.R.4

Review - Factoring & Solving Quadratic Equations

Greatest Common Factor = highest(-) coefficient and lowest + exponent on the variable

Ex. 1 Factor the expression.

$9ab^3c^5 - 15ab^4c^2$

$3ab^3c^2(3c^3 - 5b)$

You Try 2 Factor the expression.

$14x^4yz^2 + 35x^2y^3z^2$

$7x^2yz^2(2x^2 + 5y^2)$

Solving a quadratic equation means to find the X-intercept, zeros, and roots.  
\*\*Always look for a GCF first!

Ex. 3  $15x^2 - 25x + 10 = 0$

$5(\underset{a}{3}x^2 - \underset{b}{5}x + \underset{c}{2})$

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

$3x(x-1) - 2(x-1)$

$(3x-2)(x-1)$

$3x - 2 = 0$   
 $+2 +2$

$\frac{3x}{3} = \frac{2}{3}$

$x = \frac{2}{3}$

$x - 1 = 0$   
 $+1 +1$   
 $x = 1$

$\left\{ \frac{2}{3}, 1 \right\}$

You Try 4  $6x^2 - 21x - 45 = 0$

$3(2x^2 - 7x - 15)$

$2x^2 - 10x + 3x - 15$

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

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

$2x+3=0$   
 $-3 -3$

$\frac{2x}{2} = \frac{-3}{2}$

$x = \frac{-3}{2}$

$x - 5 = 0$   
 $+5 +5$   
 $x = 5$

$\left\{ \frac{-3}{2}, 5 \right\}$

What if your equation is not already set equal to 0? Use inverse operations to make one side equal to 0.

Ex. 5

$x^2 - 10 = 3x - 6$

$-3x \quad -3x$

$x^2 - 3x - 10 = -6$   
 $+6 \quad +6$

$x^2 - 3x - 4 = 0$

You Try 6

$2x^2 - 8x - 4 = 3x - x^2$

$-3x \quad -3x$

$2x^2 - 11x - 4 = -x^2$   
 $+x^2 \quad +x^2$

$3x^2 - 11x - 4 = 0$

\*\*ANOTHER STRATEGY: Substitute the solution options and see if you get true statements!