

DO NOW

Solve: $2x^2 - 8x = 0$
 $2x(x-4) = 0$

$2x = 0$ or $x - 4 = 0$

$x = \frac{0}{2}$ $x = 0 + 4$

$x = 0$ $x = 4$

$\{0, 4\}$

8.2 Solving Quadratic Equations - Day 2

Standard Form: - equal to zero
 - terms in descending order

*** Must convert quadratic equations to standard form to solve.

*** NEVER have a negative in front of the squared term.

Examples: Find the roots of the equation.

1. $x^2 = 9x - 20$

$x^2 - 9x + 20 = 0$

$(x-5)(x-4) = 0$

$x-5=0$ or $x-4=0$

$x=5$ $x=4$

$\{4, 5\}$

2. $x(x-8) = 2x-25$

$x^2 - 8x = 2x - 25$

$x^2 - 8x - 2x + 25 = 0$

$x^2 - 10x + 25 = 0$

$(x-5)(x-5) = 0$

$x-5=0$ or $x-5=0$

$x=5$ $x=5$

$\{5\}$

3. $-2x^2 + x = -15$

$0 = 2x^2 - x - 15$

$0 = (x-3)(2x+5)$

$x-3=0$ or $2x+5=0$

$x=3$ $2x=-5$

$x = -\frac{5}{2}$

$x = -2.5$

$\{-2.5, 3\}$

4. $\frac{x-7}{4} = \frac{-3}{x}$ *CROSS MULTIPLY

$x(x-7) = 4(-3)$

$x^2 - 7x = -12$

$x^2 - 7x + 12 = 0$

$(x-3)(x-4) = 0$

$x-3=0$ or $x-4=0$

$x=3$ $x=4$

$\{3, 4\}$

HOMEWORK

Worksheet - HW 8.2