W-A2 Algebra 2 Week 26

$x^2 + 7x - 18 = 0$

$\underline{-2} * \underline{9} = -18$

$\underline{-2} + \underline{9} = 7$

$(x-2)(x+9) = 0$

$x - 2 = 0 \quad x + 9 = 0$

$+2 \ +2 \qquad -9 \ -9$

$\boxed{x = 2} \qquad \boxed{x = -9}$

$\boxed{2}x^2 - 162 = 0$ (2 → 2)

Difference of Squares

$2(x^2 - 81) = 0$

$\sqrt{x^2} \qquad \sqrt{81}$

$2(x+9)(x-9) = 0$

$x + 9 = 0 \quad x - 9 = 0$

$-9 \ -9 \qquad +9 \ +9$

$\boxed{x = -9} \qquad \boxed{x = 9}$

$2x^2 - 162 = 0$

$+162 \ +162$

$\frac{2x^2}{2} = \frac{162}{2}$

$\sqrt{x^2} = \sqrt{81}$

$x = \pm 9$

$3x^2 + 11x - 20 = 0$

3

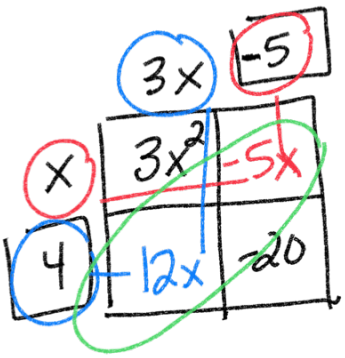
3 · 1

20

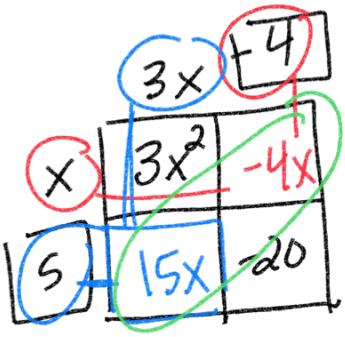
10 · 2

4 · 5

1 · 20

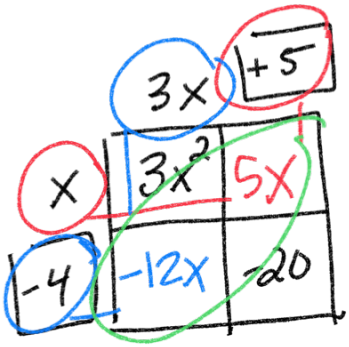


$12x - 5x = 7x$



$15x + (-4x)$

$11x$



$-12x + 5x$

$= -7x$

$(3x - 4)(x + 5) = 0$

$3x^2 + 11x - 20$

"roots"

$x = 4/3 \quad x = -5$

$3x - 4 = 0$

$+4 \quad +4$

$\frac{3x}{3} = \frac{4}{3}$

$x = \frac{4}{3}$

$x + 5 = 0$

$-5 \quad -5$

$x = -5$

$2x^2 + x - 21 = 0$

Find Roots

Factors

2	21
1·2	7·3
	1·21

$(\quad)(\quad) = 0$

	$2x$	-7
x	$2x^2$	$-7x$
$+3$	$6x$	-21

$-7x + 6x = -x$

	$2x$	$+7$
x	$2x^2$	$7x$
-3	$-6x$	-21

$7x - 6x = x$

$(2x+7)(x-3) = 0$

$2x + 7 = 0$

$-7 \quad -7$

$\frac{2x}{2} = \frac{-7}{2}$

$x = \frac{-7}{2}$

$x - 3 = 0$

$+3 \quad +3$

$x = 3$

$2x^2 + x - 21 = 0$

Standard Quadratic

$\boxed{a}x^2 + \boxed{b}x + \boxed{c}$

$a = 2 \quad b = 1 \quad c = -21$

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$\frac{-1 \pm \sqrt{(1)^2 - 4(2)(-21)}}{2(2)}$$

$$\frac{-1 \pm \sqrt{1 + 168}}{4}$$

$$\frac{-1 \pm \sqrt{169}}{4} = \frac{-1 \pm 13}{4}$$

$$x = \frac{-1 \pm 13}{4}$$

$\frac{-1+13}{4}$ $\quad$ $\frac{-1-13}{4}$

$\frac{12}{4} = 3$ $\quad$ $\frac{-14}{4} = \frac{-7}{2}$

$x^2 - 4x - 12$

$a = 1 \quad b = -4 \quad c = -12$

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$\frac{-(-4) \pm \sqrt{(-4)^2 - 4(1)(-12)}}{2(1)}$$

$$\frac{4 \pm \sqrt{16 + 48}}{2} = \frac{4 \pm \sqrt{64}}{2}$$

$$\frac{4 \pm 8}{2}$$

$\frac{4+8}{2}$ $\quad$ $\frac{4-8}{2}$

$\frac{12}{2}$ $\quad$ $\frac{-4}{2}$

$\boxed{6}$ $\quad$ $\boxed{-2}$

$5x^2 - 2x + 7$

$a = 5 \quad b = -2 \quad c = 7$

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$\frac{-(-2) \pm \sqrt{(-2)^2 - 4(5)(7)}}{2(5)}$$

$$\frac{2 \pm \sqrt{4 - 140}}{10}$$

$$\frac{2 \pm \sqrt{-136}}{10}$$

imaginary

HW
5-8 evens
Supplemental WS
Online HW 26
Quiz 26 3 April 21st
*HW/Q 24 due tonight
HW/Q 25 due April 14th