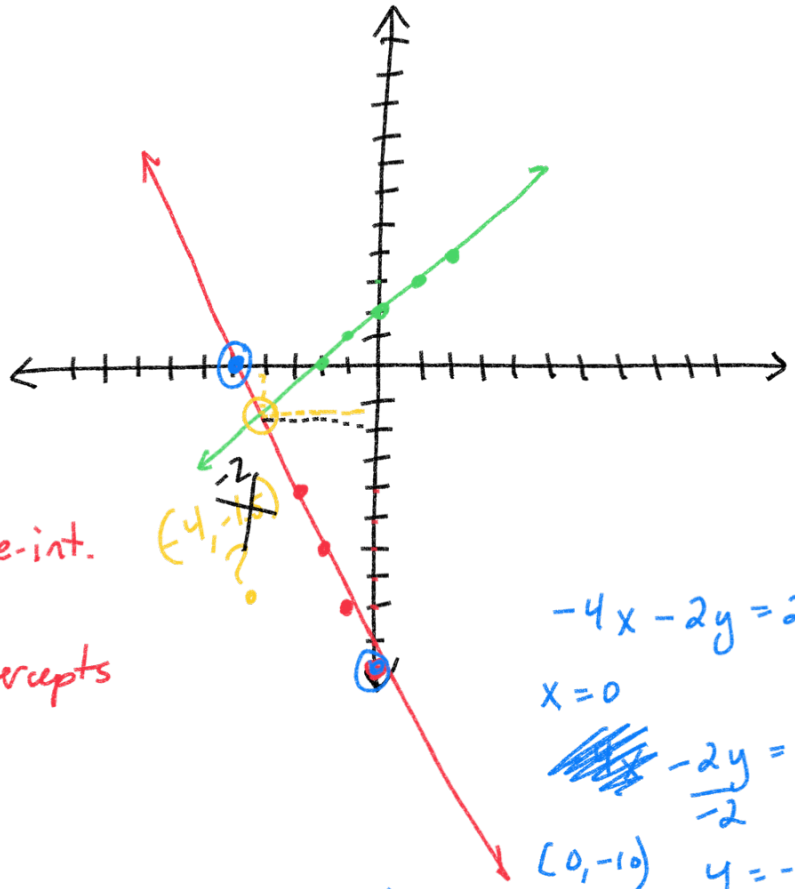
W-AZ Algebra 2 Week 15

$-4x - 2y = 20$

$y = x + 2$



$-4x - 2y = 20$

1st way: convert to slope-int.

2nd way: solve and graph both x & y intercepts

$-4x - 2y = 20$

$+4x \quad +4x$

$\frac{-2y}{-2} = \frac{4x}{-2} + \frac{20}{-2}$

$y = -2x - 10$

$-4x - 2y = 20$

$x = 0$

$\frac{-2y}{-2} = \frac{20}{-2}$

$(0, -10) \quad y = -10$

$(-5, 0) \quad y = 0$

$x = -5 \quad \frac{-4x}{-4} = \frac{20}{-4}$

→ $-4x - 2y = 20$

→ $y = x + 2$

$-4x(-2)(x + 2) = 20$

$-4x - 2x - 4 = 20$

$-6x - 4 = 20$

$+4 \quad +4$

$\frac{-6x}{-6} = \frac{24}{-6} \quad x = -4$

Substitution

$y = x + 2$

$y = -4 + 2$

$y = -2$

$(-4, -2)$

$3x + 4y = 12$

$x = y - 5$

$3(y - 5) + 4y = 12$

$3x + 4y = 12$

$x = y - 5$

$3(y-5) + 4y = 12$

$3y - 15 + 4y = 12$

$7y - 15 = 12$

$+15 \quad +15$

$\frac{7y}{7} = \frac{27}{7}$

$y = \frac{27}{7} = 3.857142\ldots$

$y + y + y - 15 + y + y + y + y = 12$

$3y \quad 7y - 15 = 12 \quad 4y$

$x = y - 5$

$x = \frac{27}{7} - 5$

$5 = \frac{35}{7}$

$x = \frac{27}{7} - \frac{35}{7} = \frac{-8}{7}$

$\left(\frac{-8}{7}, \frac{27}{7}\right)$

$x \quad y$

$x + y = -2$

$-6x - 7y = 15$

$x + y = -2$

$-y \quad -y$

$x = -y - 2$

$-6(-y-2) - 7y = 15$

$6y + 12 - 7y = 15$

$-y + 12 = 15$

$-12 \quad -12$

$\frac{-y}{-1} = \frac{3}{-1}$

$y = -3$

$x + y = -2$

$x - 3 = -2$

$+3 \quad +3$

$x = 1$

(x, y) $(1, -3)$

Solve using substitution

$6x + 4y = -16$

$[x - 2y = 8]$

① $x - 2y = 8$
$+2y \quad +2y$
$x = 2y + 8$

$6x + 4y = -16$

② ③ $6(2y + 8) + 4y = -16$

$12y + 48 + 4y = -16$

$16y + 48 = -16$
$-48 \quad -48$

$\frac{16y}{16} = \frac{-64}{16}$

$y = -4$

$x - 2y = 8$

$x - 2(-4) = 8$

$x + 8 = 8$
$-8 \quad -8$

$x = 0$

$(0, -4)$

Elimination

$6x + 4y = -16$

$2(x - 2y = 8)$

$6x + 4y = -16$
$+ \; 2x - 4y = 16$

$8x = 0$

$\frac{8x}{8} = \frac{0}{8}$

$x = 0$

$y = -4$

$x - 2y = 8$

$0 - 2y = 8$

$\frac{-2y}{-2} = \frac{8}{-2}$

$(0, -4)$

$6x + 4y = -16$

$-6(x - 2y = 8)$

$6x + 4y = -16$
$+ \; -6x + 12y = -48$

$16y = -64$

$\frac{16y}{16} = \frac{-64}{16}$

$y = -4$

$x = 0$

$2(-5x - 10y = -20)$

$5(8x + 4y = 20)$

$8(-5x - 10y = -20)$

$5(8x + 4y = 20)$

$-40x - 80y = -160$

$+ \quad 40x + 20y = 100$

$-60y = -60$

$\frac{-60y}{-60} = \frac{-60}{-60}$

$y = 1$

substitution

$-4(x) - 2y = -16$

$(x) - 3y = 4$

$x - 3y = 4$

$+3y \quad +3y$

$x = 3y + 4$

$-4(3y + 4) - 2y = -16$

$\begin{cases} \frac{-5x}{-5} - \frac{10y}{-5} = \frac{-20}{-5} \\ \frac{8x}{4} + \frac{4y}{4} = \frac{20}{4} \end{cases}$

$x + 2y = 4$

$2x + y = 5$

$-5x - 10y = -20$

$-5x - 10(1) = -20$

$-5x - 10 = -20$

$+10 \quad +10$

$\frac{-5x}{-5} = \frac{-10}{-5}$

$x = 2$

$(2, 1)$

elimination

$\begin{cases} -2(4x + 2y = 18) \\ 8x - 9y = -3 \end{cases}$

$-8x - 4y = -36$

$+ \quad 8x - 9y = -3$

$\frac{-13y}{-13} = \frac{-39}{-13}$

$y = 3$

HW

* Ch 3.2 evens
* Supplemental WS
* Online HW 15 } Jan 27th
* Quiz 15

HW/Quiz 14 due Jan 20th