FMP10 Name: _____

Date: _____

Warm-Up 2: Linear Equation Solving

Recall: The **solution** of an equation is the value of the variable which satisfies the equation (makes the equation true)

Ex. Is $x = 3$ the solution to $5x - 3 = 3x + 4$?

$5x - 3 \neq 3x + 4$

$5(3) - 3 \quad 3(3) + 4$

$15 - 3 \quad 9 + 4$

$12 \neq 13$

no $x = 3$ is not the solution

Ex. Is $y = -2$ the solution to $-5y - 7 = 2y + 7$

$-5(-2) - 7 \quad 2(-2) + 7$

$10 - 7 \quad -4 + 7$

$3 \neq 3$

yes $y = -2$ is a soln

To **solve** an equation we **isolate** the variable by performing opposite operations to both sides of the equation until the variable is by itself on one side and has a coefficient of 1.

Ex. Solve:

a) $2x + 6 = 20$

$-6 \quad -6$

$\frac{2x}{2} = \frac{14}{2}$

$x = 7$

b) $8x = 3x - 15$

$-3x \quad -3x$

$\frac{5x}{5} = \frac{-15}{5}$

$x = -3$

c) $2x + 7 = 6x - 5$

$-6x - 7 \quad -6x - 7$

$\frac{-4x}{-4} = \frac{-12}{-4}$

$x = 3$

d) $-9t - 7 = -5 - 8t$

$+8t + 7 \quad +7 \quad +8t$

$\frac{-t}{-1} = \frac{2}{-1}$

$t = -2$

Practice: WS34/41 – work on separate sheet; attach to worksheet