Workplace Math 10
Two Step Review

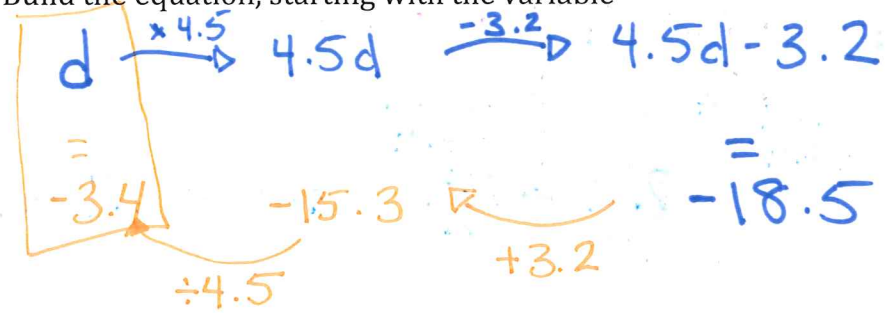
Name: _____
Block: _____

Solving Two-Step Equations

To solve a two-step equation, we still use inverse operations but we have to be careful of the order in which we apply them to isolate the variable.

Ex. 1: Use inverse operations to solve $4.5d - 3.2 = -18.5$.

Build the equation, starting with the variable



evaluating → BEDMAS ← solving equations.

Solve the equation to find the value of the variable

From the example above, we can see that we will always "undo" the +/- first, then "undo" the ×/÷ last. Think "reverse BEDMAS".

Ex. 2: Solve:

(a) $-3 + \frac{r}{4} = 7.2$

$+3 \quad -3$

$4\left(\frac{r}{4}\right) = (4.2)4$

$r = 16.8$

$r \xrightarrow{\div 4} \xrightarrow{+3}$ (2) (1) $\xleftarrow{\times 4} \xleftarrow{-3}$

(b) $-11 = -2(m + 4)$

$-11 = -2m - 8$

$+8 \qquad +8$

$-3 = -2m$

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

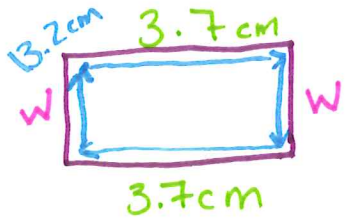
$1.5 = m$

OR

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

$m \xrightarrow{\times -2} \xrightarrow{-8}$ $\xleftarrow{\div(-2)} \xleftarrow{+8}$

Ex. 3: A rectangle has length 3.7 cm and perimeter 13.2 cm. Write and solve an equation that will determine the width of the rectangle.



width = unknown.
use a variable (letter) that makes sense

width = w

$3.7 + w + 3.7 + w = 13.2\text{ cm}$

$7.4 + 2w = 13.2$

$-7.4 \quad -7.4$

$\frac{2w}{2} = \frac{5.8}{2} \rightarrow w = 2.9\text{ cm}$

Ex. 4: Jenna works in a clothing store. She earns $2000 per month, plus a commission of 8% of her sales. Last month, Jenna earned $2400. Determine her sales for the month.

$2000 + 0.08s = 2400$

$-2000 \quad -2000$

$\frac{0.08s}{0.08} = \frac{400}{0.08}$

$s = 5000$

Jenna made $5000 in sales.