

## Today's Plan:

**Learning Target (standard):** I will write elements in a set using the roster method and set builder notation.

**Students will:** Complete practice problems over previous concepts at the boards, put up homework problems on the board and make necessary corrections to their own work, take notes over new material and complete practice problems over new concepts.

**Teacher will:** Provide practice problems over previous concepts, check homework problems for accuracy and provide students feedback, describe and provide examples of new concepts and assign students assessment problems over new concepts.

**Assessment:** Board work, homework check and homework assignment

**Differentiation:** Students will work at the board, go over and correct homework at their seats, actively engage in lecture over new concepts, practice new concepts with the aid of other students and the teacher and complete homework assignment.

### p.207 #1-25 odd

$$1)W = -L + \frac{P}{2}$$

$$3)C = \frac{S}{1-r}$$

$$5)R = \frac{PV}{nt}$$

$$7)m_2 = \frac{Fr^2}{Gm_1}$$

$$9)R = \frac{E}{I} - r$$

$$11)b_2 = \frac{2A}{h} - b_1$$

$$13)R_2 = \frac{RR_1}{R_1 - R}$$

$$15)d = \frac{a_n - a_1}{n-1}$$

$$17)H = \frac{S - 2WL}{2L + 2W}$$

$$19)x = -\frac{by}{a} - \frac{c}{a}$$

$$21)x = \frac{-b + d}{a - c}$$

$$23)x = \frac{ac}{b}$$

$$25)x = \frac{ab}{a + b}$$

$$2 \left[ A = \frac{1}{2}h(b_1 + b_2) \right]; b_2$$

$$2A = h(b_1 + b_2)$$

$$2 = 4 + b_2h$$

$$2A = b_1h + \underline{b_2h}$$

$$-b_1h \quad -b_1h$$

$$\frac{2A - b_1h}{h} = \frac{b_2h}{h}$$

$$\frac{2A}{h} - b_1 = b_2$$

$$b_2 = \frac{2A}{h} - b_1$$

Solve for  $y$  :

$$5x - y = 13$$

$$-5x \quad -5x$$

$$\underline{-y} = \underline{-5x} + \underline{13}$$

$$y = 5x - 13$$

Solve for  $y$  :

$$\left[ 7x - \frac{3}{4}y = 5 \right] \cdot 4$$

$$\begin{array}{r} 28x - 3y = 20 \\ -28x \quad + \quad -28x \end{array}$$

$$\frac{-3y}{-3} = \frac{-28x + 20}{-3}$$

$$y = \frac{28}{3}x - \frac{20}{3}$$

Solve for  $h$  :

$$\frac{A}{b_1 + b_2} = \frac{h(b_1 + b_2)}{b_1 + b_2}$$

$$\frac{A}{b_1 + b_2} = h$$

$$h = \frac{A}{b_1 + b_2}$$

Solve for  $n$  :

$$S = 180(n - 2)$$

$$S = 180n - 360$$

$+360$ 
 $+360$

$$\frac{S+360}{180} = \frac{180n}{180}$$

$$\frac{S}{180} + 2 = n$$

$$n = \frac{S}{180} + 2$$

## Sets:

- A **set** is a collection of objects that typically have something in common
- The objects in a set are called the **elements** of the set
- There are two different methods for writing the elements of a set:
  - the **roster method** lists all of the elements of a set in order, usually numerically
  - the **set builder notation** uses symbols to write the elements of the set

$$\{x \mid \dots\}$$

## The Roster Method:

- Write the set of integers greater than 5, but less than 15

$$\{6, 7, 8, 9, 10, 11, 12, 13, 14\}$$

- Write the set of integers greater than or equal to -3, but less than 7

$$\{-3, -2, -1, 0, 1, 2, 3, 4, 5, 6\}$$

- Write the set of real numbers greater than -1, but less than 25



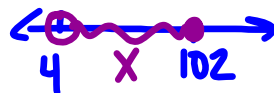
## Set Builder Notation:



- Write the set of real numbers greater than -1, but less than 25

$$\{x \mid -1 < x < 25, x \in \mathbb{R}\}$$

- Write the set of natural numbers greater than 4, but less than or equal to 102



$$\{x \mid 4 < x \leq 102, x \in \mathbb{N}\}$$