

32. let $n = \text{number}$

$$3n + (-4) \geq 2n + 8$$

$$\begin{array}{r} 3n - 4 \geq 2n + 8 \\ -2n \quad -2n \end{array}$$

$$1n - 4 \geq 8$$

$$\begin{array}{r} 1n - 4 \geq 8 \\ +4 \quad +4 \end{array}$$

$$1n \geq 12$$

40. $h = \text{hrs left to volunteer}$

$$3:15 + 2:20 + h \leq 25$$

$$5:35 + h \leq 25:00$$

$$\begin{array}{r} 4 \\ 25:00 \\ - 5:35 \\ \hline 19:25 \end{array}$$

$$h \leq 19:25 \quad 19 \text{ hrs } 25 \text{ min.}$$

34. $h = \# \text{ of hrs}$

$$8h + 1300.00 \geq 5440.00$$
$$\begin{array}{r} 8h + 1300.00 \geq 5440.00 \\ -1300.00 \quad -1300.00 \\ \hline \end{array}$$

$$\frac{8}{8}h \geq \frac{4140.00}{8}$$

$$h \geq 517.5$$

$$\boxed{517 \frac{1}{2} \text{ hrs } \quad 517 \text{ hr } 30 \text{ min}}$$

$\$4140.00$
left to
save

60.

$$10 \overline{) \boxed{1780}}$$

$$10 \overline{) \overset{\textcircled{179}}{1790}}$$

179 pts

70.

$$a_1 = 52 \quad d = 12 \quad n = 102$$

$$a_n = a_1 + d(n-1)$$

$$a_n = 52 + 12(102-1)$$

$$a_n = 1264$$

$a_n = n$ th
term in
a sequence

72. 0.5 1 1.5 2 $n=50$
 $\underbrace{\hspace{1.5cm}}_{+0.5}$ $\underbrace{\hspace{1.5cm}}_{+0.5}$ $\underbrace{\hspace{1.5cm}}_{+0.5}$

$$a_1 = 0.5 \quad d = +0.5 \quad n = 50$$

$$a_n = a_1 + d(n-1)$$

$$a_n = 0.5 + 0.5(50-1)$$

The Golden Rule of Inequalities

Whenever you **multiply or divide** by a **negative** number **flip** the inequality symbol

1. isolate the variable on the left side **Order Matters**
2. check the order **Variable** **Inequality** **Constant**
3. circle the # on the # line
4. open circle or closed circle
5. shade in the direction of the inequality

$$\begin{array}{r} 5 - 3x \leq 13 + x \\ -1x \qquad \quad -x \\ \hline 5 - 4x \leq 13 \end{array}$$

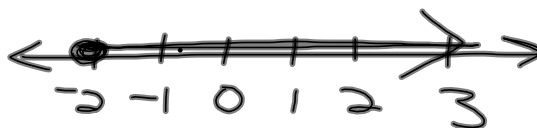
$$\begin{array}{r} -4x \leq 8 \\ \div 4 \qquad \quad \div 4 \\ \hline x \geq -2 \end{array}$$

$$\begin{array}{r} D | U \\ \hline -4 | \div -4 \end{array}$$

Open Circle
 $< > \neq$

$$x \geq -2$$

Closed Circle
 $\leq \geq =$



Variable	Inequality	constant
n	$> < \leq \geq$	$\#$

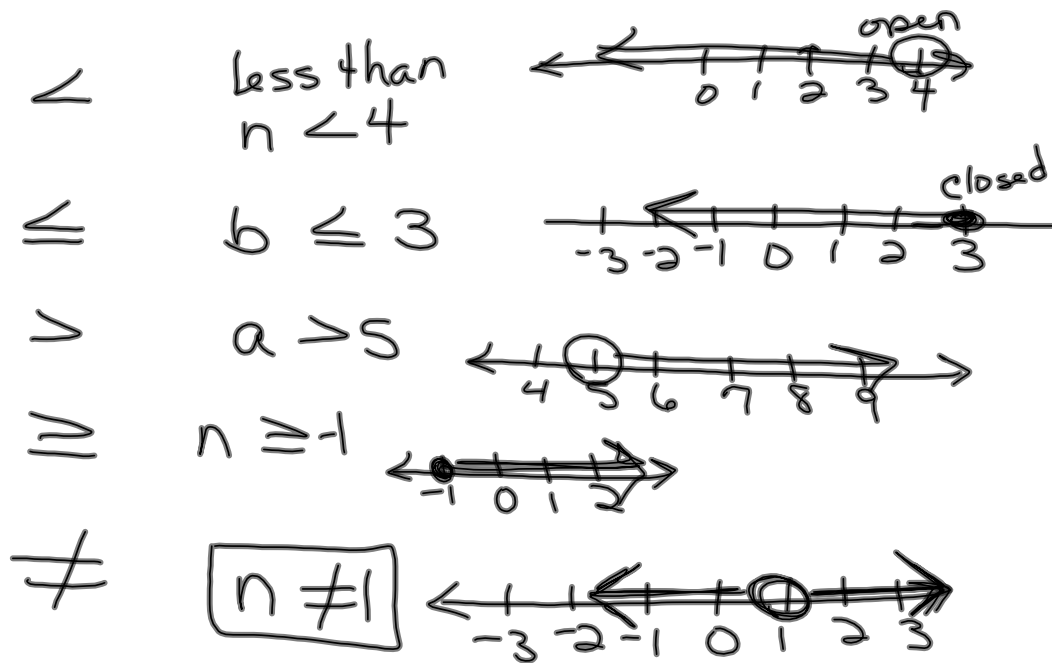
If you have to
flip the sides
to get the variable
on the left
then flip the symbol

$$\begin{array}{r} 11 > b \\ b < 11 \end{array} \quad \text{flip}$$

$$n > 4$$

Variable inequality constant

Shade in the direction of
the inequality.



$$\frac{5}{1} \cdot \cancel{\frac{1}{5}} m \geq -3 \cdot \frac{5}{1}$$
$$m \geq -15$$

If the negative is w/ the variable
then flip

$$60t > 8$$

$$\frac{-42}{6} \geq \frac{6}{6}r$$

$$-7 \geq r$$

$$r \leq -7$$

$$\begin{array}{l} \underline{5-2} \\ 10 - 40 \\ \text{add } 60 - 62 \quad | \text{absolute value} | \end{array}$$

$\{n \mid n$ $\}$ Set builder
Notation

