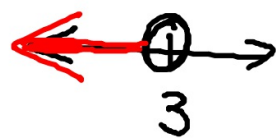
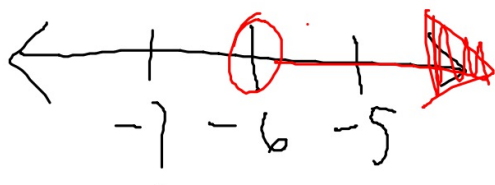


< LESS Than $x < 3$



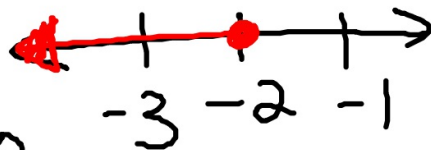
> Greater than
 $x > -6$



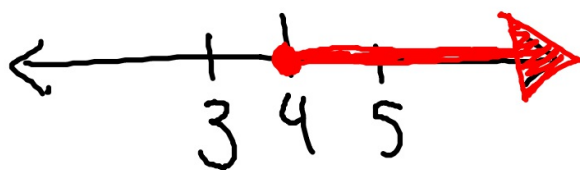
Use open circles because the solution starts around 3.

\leq LESS or EQUAL to

$$x \leq -2$$



\geq Greater or EQUAL to
 $x \geq 4$



Solid dot because THE POINT IS A SOLUTION

Write an INequality

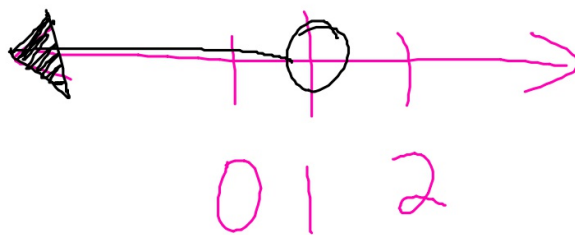


$$x > -7$$

Solution & Graphs

$$x + 8 < 9$$

$$\begin{array}{r} -8 \quad -8 \\ \hline x < 1 \end{array}$$

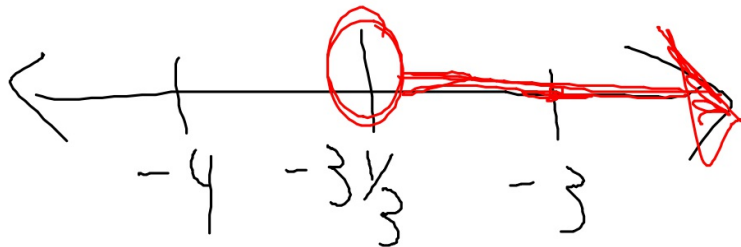


$$-1\frac{1}{3} < m + 2$$

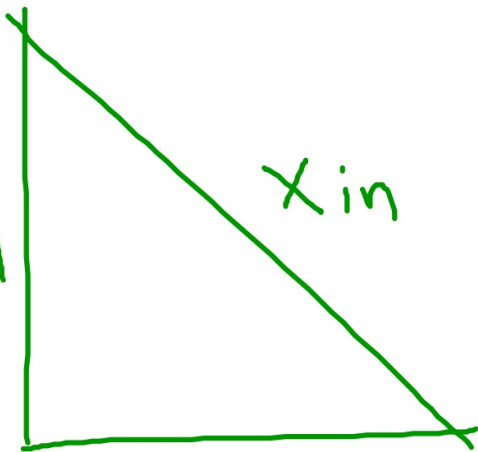
$$\frac{-2 \quad -2}{\hline}$$

$$m > -3\frac{1}{3}$$

$$-3\frac{1}{3} < m$$



$$21.6 < 51.3 / 4.2 \text{ in}$$



$$P < 51.3$$

$$14.2 + 15.5 + x < 51.3$$

$$29.7 + x < 51.3$$

$$-29.7 \quad -27.7$$

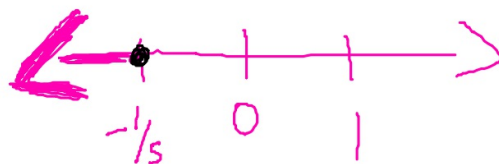
Homework:
301-302
10-21,28

$$13. \quad n + 17 \leq 16 \frac{4}{5}$$

$$\quad -17 \quad -17$$

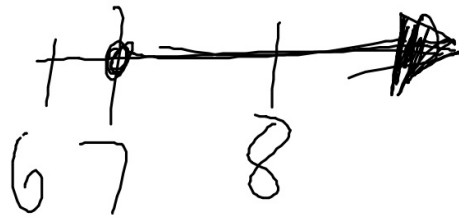
$$n \leq -\frac{1}{5}$$

$$\begin{array}{r} \cancel{6} \frac{5}{5} \\ -17 \frac{5}{5} \\ +16 \frac{4}{5} \\ \hline -\frac{1}{5} \end{array}$$



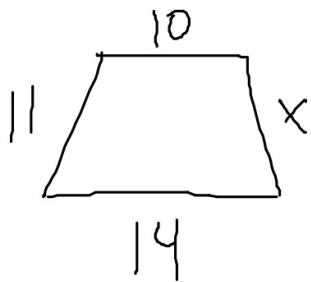
#18

$$\begin{array}{r} -1\frac{1}{3} \leq P - 8\frac{1}{3} \\ 8\frac{1}{3} \quad +8\frac{1}{3} \\ \hline 7 \leq P \end{array}$$



#28

$$4.1 + 4.9 + 6.4 + x \leq 18.7$$



$$P < 40$$

$$11 + 14 + 10 + x < 40$$

$$\begin{array}{r} 35 + x < 40 \\ -35 \quad -35 \end{array}$$

$$x < 5$$

$$10.5 + 4.9$$

$$15.4 + x \leq 18.7$$

$$\begin{array}{r} -15.4 \quad -15.4 \end{array}$$

$$x \leq 3.3$$

19

$$g - 1\frac{1}{3} > -2\frac{1}{2}$$

$$g - 1\frac{2}{6} \quad -2\frac{3}{6}$$

$$+ 1\frac{2}{6} \quad + 1\frac{2}{6}$$

$$g > -1\frac{1}{6}$$

1/23 Solve Inequalities using Division and Multiplication

Pg.304

When mult/Div by a
Positive Number

No Change in
INEQUALITY Direction.

$$\frac{8x}{8} < \frac{16}{8}$$
$$x < 2$$

$$2. \frac{x}{2} \geq -3 \cdot 2$$

Positive

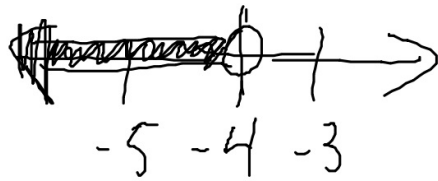
$$x \geq -6$$



Negative Coefficient

When you mult/Div by
a negative number
The inequality changes direction.

$$-3 \cdot (-6) = 18$$
$$\frac{-3x > 12}{-3} \quad \downarrow$$
$$x < -4$$



Which one switches
the inequality sign Direction?

$$\frac{-4x \geq -16}{-4} \quad \downarrow$$
$$x \leq 4$$

$$2 \cdot \frac{x \leq -4 \cdot 2}{2}$$
$$x \leq -8$$

