

Homework

Name _____

Write, Solve, and Graph One-Step Inequalities

Write an inequality for each statement. Solve the inequality and graph the solution.

- 1.) The sum of a number and 10 is less than 15.

$$n + 10 < 15$$

$$n < 5$$



- 2.) Twice a number is not less than 6.

$$2n \geq 6$$

$$n \geq 3$$



- 3.) The difference of a number and 12 is at most 13.

$$\begin{array}{r} n - 12 \leq 13 \\ +12 \quad +12 \\ \hline \end{array}$$

$$n \leq 25$$

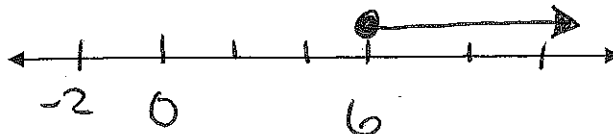


- 4.) One third of a number is greater than or equal to 2.

$$\frac{1}{3}n \geq 2$$

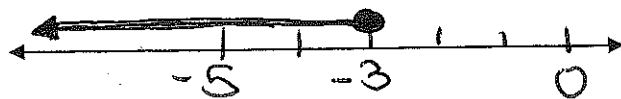
$$\div \frac{1}{3} \quad (3)$$

$$n \geq 6$$



5.) The product of -4 and a number is at least 12 .

$$\begin{array}{r} -4n \geq 12 \\ \hline \frac{-4n}{-4} \geq \frac{12}{-4} \quad \text{flip} \\ n \leq -3 \end{array}$$



6.) Seven plus a number is less than or equal to 10 .

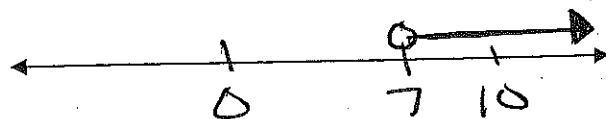
$$\begin{array}{r} 7 + n \leq 10 \\ \hline \frac{7 + n}{-7} \leq \frac{10}{-7} \\ n \leq 3 \end{array}$$



7.) A number divided by 7 is greater than 1 .

$$\frac{n}{7} > 1$$

$$n > 7$$



8.) Four minus a number is not more than 6 .

$$\begin{array}{r} 4 - n \leq 6 \\ \hline \frac{4 - n}{-1} \leq \frac{6}{-1} \end{array}$$

$$\begin{array}{r} -n \leq 2 \\ \hline \frac{-n}{-1} \geq \frac{2}{-1} \quad \text{flip} \\ n \geq -2 \end{array}$$

