

NAME \_\_\_\_\_

HW # 9

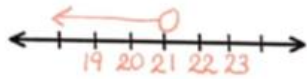
**Remember:**

- 1) Solve like an "equation"
- 2) Use properties of inequality
- 3) Represent the solution set graphically

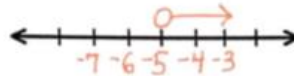
$>$ greater than	<input type="radio"/>
$<$ less than	<input type="radio"/>
$\geq$ greater than or equal to	<input checked="" type="radio"/>
$\leq$ less than or equal to	<input checked="" type="radio"/>

Solve each inequality and graph the solution.

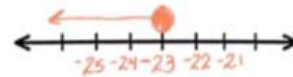
1.  $x - 8 < 13$   
 $\begin{array}{r} x - 8 < 13 \\ +8 \quad +8 \\ \hline x < 21 \end{array}$



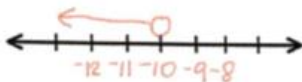
2.  $5y > -25$   
 $\begin{array}{r} 5y > -25 \\ \div 5 \quad \div 5 \\ \hline y > -5 \end{array}$



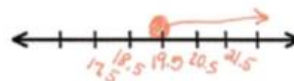
3.  $2p + 7 \leq -39$   
 $\begin{array}{r} 2p + 7 \leq -39 \\ -7 \quad -7 \\ \hline 2p \leq -46 \\ \div 2 \quad \div 2 \\ \hline p \leq -23 \end{array}$



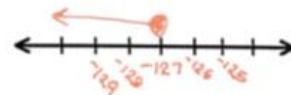
4.  $-12 > x - 2$   
 $\begin{array}{r} -12 > x - 2 \\ +2 \quad +2 \\ \hline -10 > x \end{array}$   
 Flip  $\rightarrow$   $x < -10$



5.  $\frac{2}{3}a - 5 \geq 8$   
 $\begin{array}{r} \frac{2}{3}a - 5 \geq 8 \\ +5 \quad +5 \\ \hline \frac{2}{3}a \geq 13 \\ \cdot \frac{3}{2} \quad \cdot \frac{3}{2} \\ \hline a \geq \frac{39}{2} \end{array}$   
 $\frac{39}{2} = 19.5$   
 $a \geq 19.5$  or  $a \geq 19.5$



6.  $\frac{m}{10} + 9.4 \leq -3.3$   
 $\begin{array}{r} \frac{m}{10} + 9.4 \leq -3.3 \\ -9.4 \quad -9.4 \\ \hline \frac{m}{10} \leq -12.7 \end{array}$   
 $(10) \frac{m}{10} \leq -12.7 (10)$   
 $m \leq -127$



7. Choose the inequality that can be used to solve the following word problem.

Solve the inequality you chose in order to answer the question.

Ali wants to spend at most \$10 for a taxi ride. There is an initial charge of \$2 for the taxi. The meter then adds \$1.25 for every mile,  $m$ . What is the maximum number of whole miles Ali can ride in the taxi?

- A.  $\$2 + \$1.25m > \$10$   
 C.  $\$2 + \$1.25m \geq \$10$

B.  $\$2 + \$1.25m < \$10$  at most \$10

D.  $\$2 + \$1.25m \leq \$10$

$$\begin{array}{r} 1.25m \leq 8 \\ \div 1.25 \quad \div 1.25 \\ \hline m \leq 6.4 \end{array}$$

$m \leq 6.4$   
 6 is the maximum # of