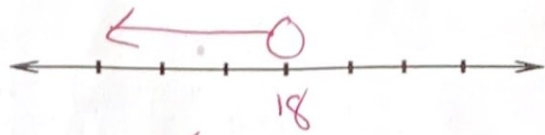


Solving Linear Inequalities

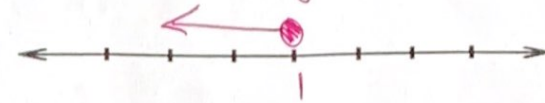
Name: Key Date: _____
 Period: _____

Classwork: Solve each inequality. Then check your solution, and graph it on a number line.

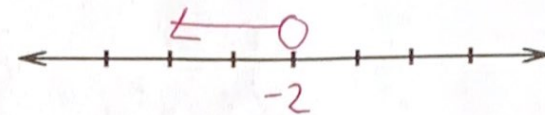
1. $a - 12 < 6$
 $\begin{array}{r} a - 12 < 6 \\ +12 \quad +12 \\ \hline a < 18 \end{array}$



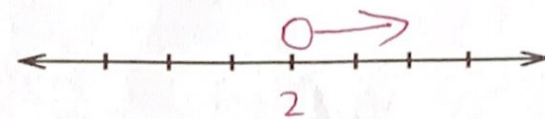
2. $2x \leq x + 1$
 $\begin{array}{r} 2x \leq x + 1 \\ -x \quad -x \\ \hline x \leq 1 \end{array}$



3. $\frac{-2x}{-2} > \frac{4}{-2}$
 $x < -2$



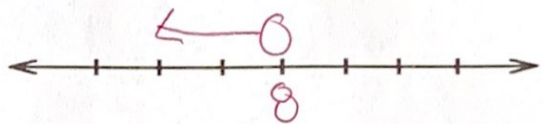
4. $2x + 3 > x + 5$
 $\begin{array}{r} 2x + 3 > x + 5 \\ -x \quad -x \\ \hline x + 3 > 5 \\ -3 \quad -3 \\ \hline x > 2 \end{array}$



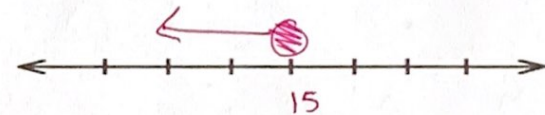
Solve each inequality. Then check your solution.

5. $\frac{1}{2}x < 4 \cdot 2$

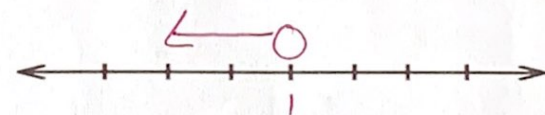
$x < 8$



6. $3x - 9 \leq 2x + 6$
 $\begin{array}{r} 3x - 9 \leq 2x + 6 \\ -2x \quad -2x \\ \hline x - 9 \leq 6 \\ +9 \quad +9 \\ \hline x \leq 15 \end{array}$



7. $-17x - 25 < 75 - 117x$
 $\begin{array}{r} -17x - 25 < 75 - 117x \\ +117x \quad +117x \\ \hline 100x - 25 < 75 \\ +25 \quad +25 \\ \hline 100x < 100 \\ \frac{100x}{100} < \frac{100}{100} \\ x < 1 \end{array}$



8. $3(r - 2) < 2r + 4$
 $\begin{array}{r} 3(r - 2) < 2r + 4 \\ -2r \quad -2r \\ \hline 3r - 6 < 2r + 4 \\ -r \quad -r \\ \hline r - 6 < 4 \\ +6 \quad +6 \\ \hline r < 10 \end{array}$

