

Inequalities Quiz Review

Graph the following inequalities.

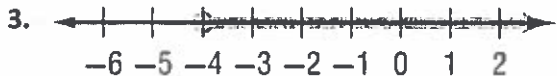
1. $x < 4$



2. $7 \leq n \rightarrow n \geq 7$



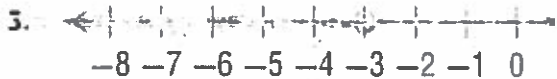
Write the algebraic inequality for each of the graphs provided.



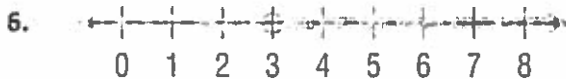
$x \geq -4$



$x \leq 7$



$x \leq -3$



$x > 3$

Solve each inequality. Show your work! For #13-15, also graph the solution set on the number line. Circle/Box your final answer.

7. $m + 2 \geq 6$

$\begin{array}{r} -2 \\ -2 \\ \hline m \geq 4 \end{array}$

8. $12 \leq t - 9$

$\begin{array}{r} +9 \\ +9 \\ \hline 21 \leq t \rightarrow t \geq 21 \end{array}$

9. $4 < \frac{c}{5} \cdot 5$

$\begin{array}{r} 5 \\ 5 \\ \hline 20 < c \rightarrow c > 20 \end{array}$

10. $8x > 24$

$\begin{array}{r} -8 \\ -8 \\ \hline x < -3 \end{array}$

11. $4a - 7 > 14$

$\begin{array}{r} +7 \\ +7 \\ \hline 4a > 21 \\ \frac{4}{4} \\ \hline a > 4 \end{array}$

12. $-3 \leq \frac{2}{3}r + 9$

$\begin{array}{r} -9 \\ -9 \\ \hline -3 \leq \frac{2}{3}r \\ \frac{3}{2} \cdot \frac{3}{2} \\ \hline -18 \leq r \rightarrow r \geq -18 \end{array}$

13. $2x + 11 \leq 5x - 10$

$\begin{array}{r} -5x \\ -5x \\ \hline -3x + 11 \leq -10 \\ +11 \\ +11 \\ \hline -3x \leq -21 \\ \frac{-3}{-3} \\ \hline x \geq 7 \end{array}$

14. $-2(4b + 1) < -3b + 8$

$\begin{array}{r} -8b - 2 < -3b + 8 \\ +3b \\ +3b \\ \hline -5b - 2 < 8 \\ +2 \\ +2 \\ \hline -5b < 10 \\ \frac{-5}{-5} \\ \hline b > -2 \end{array}$

15. $-5(g + 4) > 3(g - 4)$

$\begin{array}{r} -5g - 20 > 3g - 12 \\ -3g \\ -3g \\ \hline -8g - 20 > -12 \\ +20 \\ +20 \\ \hline -8g > 8 \\ \frac{-8}{-8} \\ \hline g < -1 \end{array}$

