

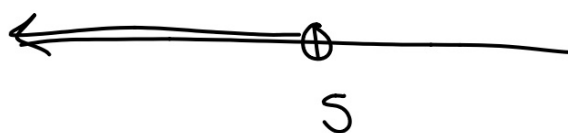
Algebra 1 Review Ch. 5
Quiz Thurs 5.3-5.4

Test is Fri. (MCT 5.1-5.4)!

Example 1

Solve $x - 9 < -4$. Then graph it on a number line.

$$\begin{array}{r} x - 9 < -4 \\ +9 \quad +9 \\ \hline x < 5 \end{array}$$



Example 2

Solve $-14h < 56$. Check your solution.

$$\frac{-14h}{-14} < \frac{56}{-14}$$

$$h > -4$$



$$\begin{aligned} -14 \cdot 0 &< 56 \\ \text{"} \quad 0 &< 56 \end{aligned}$$

Example 3

Solve $-6y - 13 > 29$. Check your solution.

$$\begin{array}{r} +13 \quad +13 \\ \hline -6y > 42 \\ \hline -6 \quad -6 \end{array}$$

$$y < -7$$

Whiteboards

$$\begin{array}{l} -6 \cdot -10 - 13 > 29 \\ 60 - 13 > 29 \\ \text{" } 47 > 29 \end{array}$$



$n = \text{number}$

29. Four times a number decreased by 6 is less than -2 .
Define a variable, write an inequality, and solve for the number.

$$\begin{array}{rcl} 4n - 6 & < & -2 \\ + 6 & & + 6 \\ \hline 4n & < & 4 \\ \frac{4n}{4} & < & \frac{4}{4} \\ n & < & 1 \end{array}$$

12. $5b - 1 \geq -11$

13. $21 > 15 + 2a$

16. $-a + 6 \leq 5$

17. $37 < 7 - 10w$

$n = \text{a number}$

Define a variable, write an inequality, and solve each problem. Check y

22. Three fourths of a number decreased by nine is at least forty-two.

$$\begin{array}{rcl} \frac{3}{4}n - 9 & \geq & 42 \\ + 9 & & + 9 \\ \hline \frac{4}{3} \cdot \frac{3}{4}n & \geq & 51.4\frac{4}{3} \\ n & \geq & 68 \end{array}$$

23. Two thirds of a number added to six (is at least) twenty-two.

$$\frac{2}{3}n + 6 \geq 22$$

26. Ten is no more than 4 times the sum of twice a number and three.



STRUCTURE Solve each inequality. Graph the solution on a number line.

29. $-3(7n + 3) < 6n$

30. $21 \geq 3(a - 7) + 9$

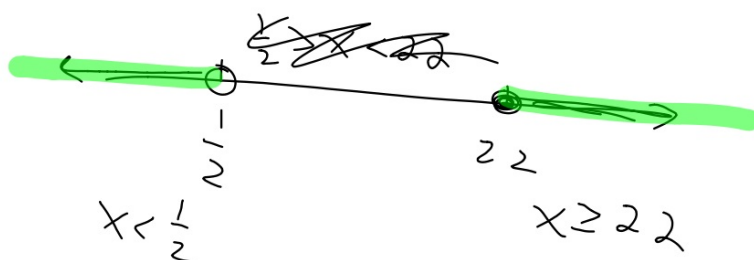
$$2n + 5 < 6 \quad \text{or} \quad n - 3 \geq 19$$

$$\begin{array}{ccc} \downarrow & +3 & +3 \\ 2n & & n \end{array}$$

$$\frac{2n}{2} < \frac{1}{2}$$

$$n < \frac{1}{2}$$

$$n \geq 22$$

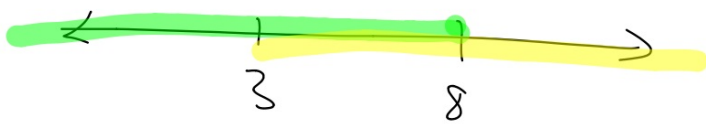


$$2n-1 < 3n+2 \leq n+18$$

$$\begin{array}{l} \boxed{2n-1 < 3n+2} \text{ and } \boxed{3n+2 \leq n+18} \\ \hline \begin{array}{r} 2n-1 < 3n+2 \\ -2n-2 \quad -2n-2 \\ \hline -3 < n \end{array} \end{array}$$

$$n > -3 \quad \text{and} \quad n \leq 8$$

$$\begin{array}{c} \text{Number line diagram showing the solution set } -3 < n \leq 8. \\ \text{The number line is marked with } -3 \text{ and } 8. \\ \text{An open circle is at } -3 \text{ and a closed circle is at } 8. \\ \text{The region between } -3 \text{ and } 8 \text{ is shaded green.} \end{array}$$



and $3 < x < 8$

or all real numbers
ARN

and
NS



p 304 1-27 odd

p 308 8, 10, 12