

Algebra 1 Review Ch. 5  
Quiz today 5.3

Test is Mon. (MCT 5.1-5.3)!

### 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

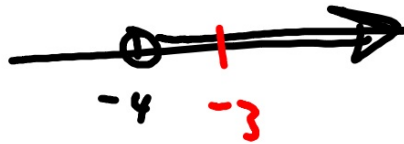
Solve  $-14h < 56$ . Check your solution.

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

$$1h > -4$$

$$h > -4$$

$$\begin{aligned} -14 \cdot -3 &< 56 \\ \Rightarrow 42 &< 56 \end{aligned}$$



### Example 3

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

$$-6 \cdot -10 - 13 > 29 \quad \checkmark$$

$$\frac{-6y}{-6} > \frac{42}{-6}$$

$$y < -7$$



Whiteboards

$$y < -7$$

$n = \text{a number}$

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

$$4 \cdot 0 - 6 < -2 \quad \text{☺}$$

$$0 - 6 < -2$$

$$4n - 6 < -2$$

+6

+6

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$$\frac{4n}{4} < \frac{4}{4} \quad n < 1$$

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

$$\quad +1 \quad +1$$

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$$\frac{5b}{5} \geq \frac{-10}{5}$$

$$b \geq -2$$

$$13. 21 > 15 + 2a$$

$$\quad -15 \quad -15$$

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$$\frac{6}{2} > \frac{2a}{2}$$

$$3 > a$$

$$a < 3$$

16.  $-a + 6 \leq 5$

$-6 -6$

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$$\frac{-a}{-1} \leq \frac{-1}{-1}$$

$$a \geq 1$$

17.  $37 < 7 - 10w$

$a = \text{number}$

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.

$$\frac{3}{4}n - 9 \geq 42$$

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$$\frac{3}{4}n \geq 51$$
$$n \geq 68$$



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