

# 3.1-3.4 Review

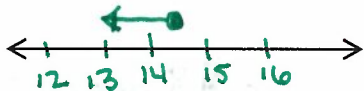
Name: Key

Solve & graph each inequality.

1.  $n - 6 \leq 8.5$

$$+6 \quad +6$$

$$n \leq 14.5$$



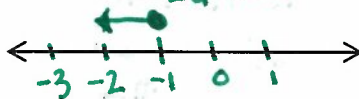
2.  $1 - 4d \geq 4 - d$

$$+4d \quad +4d$$

$$-4 \geq 4 + 3d$$

$$-3 \geq 3d$$

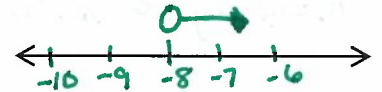
$$-1 \geq d \rightarrow d \leq -1$$



3.  $t - 5 > -13$

$$+5 \quad +5$$

$$t > -8$$



4.  $2(m - 5) + 4m \leq 56$

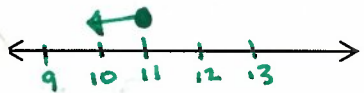
$$2m - 10 + 4m \leq 56$$

$$6m - 10 \leq 56$$

$$+10 \quad +10$$

$$\frac{6m}{6} \leq \frac{66}{6}$$

$$m \leq 11$$



5.  $6(c + 3) - 9 > 27$

$$6c + 18 - 9 > 27$$

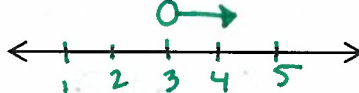
$$6c + 9 > 27$$

$$-9 \quad -9$$

$$6c > 18$$

$$\frac{6c}{6} > \frac{18}{6}$$

$$c > 3$$



6.  $x - 2 < 3x - 4$

$$-3x \quad -3x$$

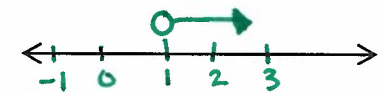
$$-2x - 2 < -4$$

$$+2 \quad +2$$

$$-2x < -2$$

$$\frac{-2x}{-2} < \frac{-2}{-2}$$

$$x > 1$$

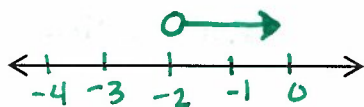


7.  $12b - 5 > -29$

$$+5 \quad +5$$

$$\frac{12b}{12} > \frac{-24}{12}$$

$$b > -2$$



8.  $4 - x \leq 3$

$$-4 \quad -4$$

$$-x \leq -1$$

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

$$x \geq 1$$



9.  $n + 7 > 3n - 1$

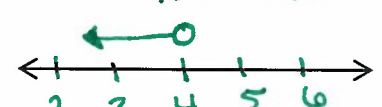
$$-n \quad -n$$

$$7 > 2n - 1$$

$$+1 \quad +1$$

$$\frac{8}{2} > \frac{2n}{2}$$

$$4 > n \rightarrow n < 4$$



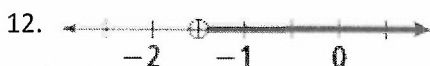
Write an inequality that represents each verbal expression or graph

10.  $b$  is less than or equal to  $-1$

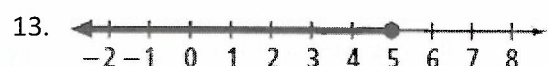
$$b \leq -1$$

11. 2 more than  $k$  is greater than  $-3$

$$k + 2 > -3$$



$$x > -1.5$$



$$x \leq 5$$

Define a variable and write an inequality for each situation.

14. A car dealership sells at least 35 cars each week

$c = \text{cars}$   $c \geq 35$

15. No more than 425 raffle tickets will be sold

$t = \text{tickets sold}$   $t \leq 425$

16. You must run faster than 11.2 seconds to win

$t = \text{time (seconds)}$   $t < 11.2$

17. You must be at least 18 years old to vote.

$a = \text{age}$   $a \geq 18$

Write & solve an equality for each situation.

18. A homeroom class with 25 students is holding a fund-raiser to support school sports. Their goal is to raise at least \$200. On average, how much money does each student need to contribute to meet or exceed the goal?

$m = \text{money per student}$

$$\begin{array}{r} 25m \geq 200 \\ \hline 25 \quad 25 \\ m \geq 8 \end{array}$$

at least \$8 per student

19. You earn \$7.50 per hour and need to earn \$35. How many hours do you need to work?

$h = \text{hour worked}$

$$\begin{array}{r} 7.50h \geq 35 \\ \hline 7.50 \quad 7.50 \end{array}$$

$h \geq 4 \frac{2}{3} \text{ hours}$

need to work at least  $4 \frac{2}{3}$  hrs.

20. The booster club raised \$102 in their car wash. They want to buy \$18 soccer balls for the soccer team. How many soccer balls could they buy?

$s = \text{soccer balls}$

$$\begin{array}{r} 18s \leq 102 \\ \hline 18 \quad 18 \end{array}$$

$s \leq 5 \frac{2}{3}$

Can't buy  $\frac{2}{3}$  of a ball so

at most 5 soccer balls

21. Suppose you are trying to increase your coin collection to at least 500 coins. How many more coins do you need if you already have a collection of 375 coins?

$c = \text{coins}$

$$\begin{array}{r} 375 + c \geq 500 \\ -375 \quad -375 \\ c \geq 125 \end{array}$$

$c \geq 125 \text{ coins}$

at least 125 more coins

22. Janet has a balance of \$125 on a credit card. On her next statement, she wants to reduce her balance to no more than \$60. How much does she need to pay off?

$m = \text{money paid}$

$$\begin{array}{r} 125 - m \leq 60 \\ -125 \quad -125 \\ -m \leq -65 \\ \hline -1 \quad -1 \\ m \geq 65 \end{array}$$

pay at least \$65

23. You are reading a book with 19 chapters. How many chapters should you read each week if you want to finish the book in 5 weeks or less?

$c = \text{chapters per week}$

$$c \cdot \frac{19}{c} \leq 5 \cdot c$$

$$\frac{19}{5} \leq \frac{5c}{5}$$

$3.8 \leq c$   
 $c \geq 3.8$

read at least 3.8 chapters per week