

3.1-3.4 Review

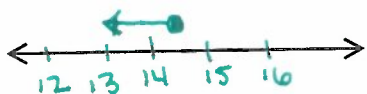
Name: Key

Solve & graph each inequality.

$$1. \quad n - 6 \leq 8.5$$

$$\quad +6 \quad +6$$

$$n \leq 14.5$$



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

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

$$6m - 10 \leq 56$$

$$\quad +10 \quad +10$$

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

$$m \leq 11$$

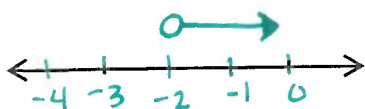


$$7. \quad 12b - 5 > -29$$

$$\quad +5 \quad +5$$

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

$$b > -2$$



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

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

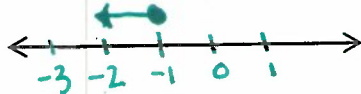
$$1 \geq 4 + 3d$$

$$\quad -4 \quad -4$$

$$-3 \geq 3d$$

$$\quad \div 3 \quad \div 3$$

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



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

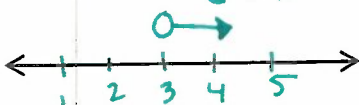
$$6c + 18 - 9 > 27$$

$$6c + 9 > 27$$

$$\quad -9 \quad -9$$

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

$$c > 3$$



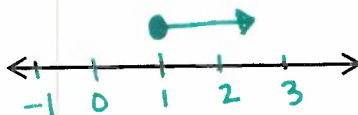
$$8. \quad 4 - x \leq 3$$

$$\quad -4 \quad -4$$

$$-x \leq -1$$

$$\quad \div -1 \quad \div -1$$

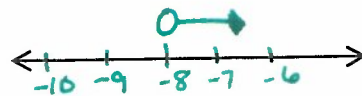
$$x \geq 1$$



$$3. \quad t - 5 > -13$$

$$\quad +5 \quad +5$$

$$t > -8$$



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

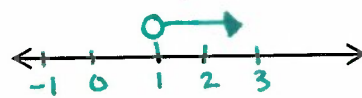
$$\quad -3x \quad -3x$$

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

$$\quad +2 \quad +2$$

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

$$x > 1$$



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

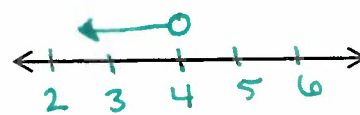
$$\quad -n \quad -n$$

$$7 > 2n - 1$$

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

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

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



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

$$k + 2 > -3$$

12. 

$$x > -1.5$$

13. 

$$x \leq 5$$

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?

$m = \text{money per student}$

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

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?

$h = \text{hour worked}$

$$\begin{array}{r} 7.50h \geq 35 \\ \hline 7.50 \quad 7.50 \\ \hline h \geq 4\frac{2}{3} \text{ hours} \end{array}$$

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?

$s = \text{soccer balls}$

$$\begin{array}{r} 18s \leq 102 \\ \hline 18 \quad 18 \\ \hline s \leq 5\frac{2}{3} \end{array}$$

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?

$C = \text{coins}$

$$\begin{array}{r} 375 + C \geq 500 \\ -375 \quad -375 \\ \hline C \geq 125 \text{ coins} \end{array}$$

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?

$m = \text{money paid}$

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

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?

$C = \text{chapters per week}$

$$\begin{array}{r} 19C \leq 95 \\ \hline 19 \leq 5C \\ \hline 1 \leq \frac{5C}{19} \\ \hline C \geq 3.8 \end{array}$$

read at least 3.8 chapters per week