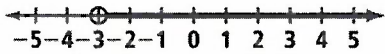


① Write an inequality to match the graph.

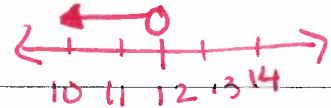


$$x > -3$$

② Solve and graph the inequality.

$$\therefore -\frac{b}{3} > -4 \cdot -3$$

$$b < 12$$



③ Solve and graph the inequality.

$$5t - 6 - 3t \leq 2(t - 2)$$

$$\begin{array}{r} 2t - 6 \leq 2t - 4 \\ -2t \quad -2t \end{array}$$

$$-6 \leq -4$$

ALL REAL NUMBERS

④

$$|3z - 6| = 9$$

$$3z - 6 = 9 \quad \text{or} \quad 3z - 6 = -9$$

$$\begin{array}{r} 3z = 15 \\ \frac{3z}{3} = \frac{15}{3} \end{array}$$

$$\begin{array}{r} 3z = -3 \\ \frac{3z}{3} = \frac{-3}{3} \end{array}$$

$$z = 5 \quad \text{or} \quad z = -1$$

⑤ Solve and graph the inequality.

$$\begin{array}{r} 8 - 7x > 15 \\ -8 \quad -8 \end{array}$$

$$\begin{array}{r} -7x > 7 \\ -7 \quad -7 \end{array}$$

$$x < -1$$



⑥

On a game show you guess the price of items. In order to win your average guesses must be no more than \$3 away from the actual price. Your first 3 guesses were over by \$5, under by \$10, and over by \$2. Write and solve an inequality to represent how far off your last guess can be in order to win.

$$\left| \frac{5 + (-10) + 2 + x}{4} \right| \leq 3$$

$$4 \cdot -3 \leq \frac{-3 + x}{4} \leq 3 \cdot 4$$

$$\begin{array}{r} -12 \leq -3 + x \leq 12 \\ +3 \quad +3 \quad +3 \end{array}$$

$$-9 \leq x \leq 15$$

7

Solve and graph the inequality.

$$|v + 4| \geq 10$$

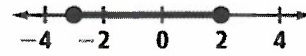
$$v + 4 \geq 10 \text{ or } v + 4 \leq -10$$

$$v \geq 6 \text{ or } v \leq -14$$



8

Write an inequality to match the graph.



$$-3 \leq x \leq 2$$

9

Write an inequality to represent the situation.

In order for students to go on a school trip, at least 50 students must sign up.

s = students signed up

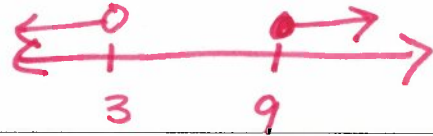
$$s \geq 50$$

10

Solve and graph the inequality.

$$\frac{-2p \leq -18}{-2} \text{ or } \frac{3p < 9}{3}$$

$$p \geq 9 \text{ or } p < 3$$



11

$$|4x - 2| + 10 = 5$$

$$|4x - 2| = -5$$

NO Solution!

12

Solve and graph the inequality.

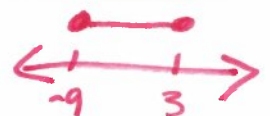
$$|2x + 6| < 12$$

$$2x + 6 < 12 \text{ and } 2x + 6 > -12$$

$$\frac{-12 \leq 2x + 6 \leq 12}{-6} \text{ and } \frac{-12 \leq 2x + 6 \leq 12}{-6}$$

$$\frac{-18 \leq 2x \leq 6}{2}$$

$$-9 \leq x \leq 3$$



13

Write an inequality to match the graph.

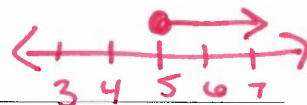


$$x < 0 \text{ or } x > 1$$

14

Solve and graph the inequality.

$$\begin{aligned} 11 &\leq 2.2t \\ \frac{11}{2.2} &\leq \frac{2.2t}{2.2} \\ 5 &\leq t \\ t &\geq 5 \end{aligned}$$



15

Write an inequality to represent the situation.

The thermostat setting keeps the temperature in a building within 2 degrees of the set temperature. If the thermostat is set at 71° , find the range of possible temperatures.

$$69 \leq t \leq 73 \quad t = \text{temps}$$

16

$$|2x + 5| - 7 = 36$$

$$\begin{aligned} |2x + 5| &= 43 \\ 2x + 5 &= 43 \quad \text{or} \quad 2x + 5 = -43 \\ 2x &= 38 \quad \text{or} \quad 2x = -48 \\ x &= 19 \quad \text{or} \quad x = -24 \end{aligned}$$

17

Write an inequality to match the graph.



$$x \leq 1$$

18

Write an inequality to represent the situation.

To win the race, Bobby must run faster than 7 minutes.

$t = \text{time}$

$$t < 7$$