

SMART START

$$-4 \leq -5x + 7 \leq 11$$

Handwritten solution for the inequality $-4 \leq -5x + 7 \leq 11$.

The inequality is split into two parts:

$$\begin{array}{l} -4 \leq -5x + 7 \\ -7 \end{array} \quad \begin{array}{l} -5x + 7 \leq 11 \\ -7 \end{array}$$

After subtracting 7 from both sides of each inequality:

$$\begin{array}{l} -11 \leq -5x \\ -5 \end{array} \quad \begin{array}{l} -5x \leq 4 \\ -5 \end{array}$$

Dividing by -5 (and reversing the inequality signs):

$$\begin{array}{l} \frac{11}{5} \geq x \\ -5 \end{array} \quad \begin{array}{l} x \geq \frac{4}{5} \\ -5 \end{array}$$

The solution set is $x \geq \frac{4}{5}$ and $x \leq \frac{11}{5}$.

A number line is shown with tick marks at -4, -3, -2, -1, 0, 1, 2, 3. A green dot is at $\frac{4}{5}$ and a red dot is at $\frac{11}{5}$. A blue shaded region is between these two dots, representing the solution set.

Six Problem Check

18)

22)

24)

26)

28)

72)

Six Problem Check

$$18) w > 56$$

$$22) k > 8$$

$$24) a < 4$$

$$26) h > 2$$

$$28) h < -79 \quad -79 > h$$

$$72) 3$$

$$16) f < -8$$

$$17) d > -125$$

$$18) w > 56$$

$$19) q \leq \frac{10}{3}$$

$$20) a \geq -9$$

$$21) r \geq -9$$

$$22) k > 8$$

$$23) v \geq 19$$

$$24) a < 4$$

$$25) w \leq 1$$

$$26) b > 2$$

$$27) t \geq -1$$

$$28) h < -79$$

$$29) \text{undefined}$$

$$30) \text{all real numbers}$$

$$36) \frac{2}{3}n + 8 > 12; n > 6$$

$$41) \frac{91 + 95 + 88 + n}{4} \geq 92$$

$$42) n \geq 94$$

$$60) d \geq 9$$

$$61) t < 8$$

$$62) y < -3$$

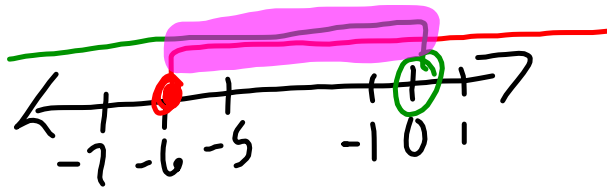
$$72) 3$$

$$73) 2.5$$

$$1) \quad -3 \leq \frac{P}{2} < 0$$

$$2 \cdot -3 \leq \frac{P \cdot 2}{2 \cdot 1} \quad \text{and} \quad 2 \cdot \frac{P}{2} < 0 \cdot 2$$

$$-6 \leq P \quad \text{and} \quad P < 0$$



$$2 \cdot -3 \leq \frac{P \cdot 2}{2} < 0 \cdot 2$$

$$-6 \leq P < 0$$

$$2) \quad -4 \leq 3x + 2 \leq 5$$

$$\textcircled{1} \quad \begin{array}{r} -4 \leq 3x + 2 \\ -2 \quad \quad \quad -2 \end{array} \quad \text{and} \quad \textcircled{2} \quad \begin{array}{r} 3x + 2 \leq 5 \\ \quad \quad \quad -2 \quad -2 \end{array}$$

$$\begin{array}{r} -6 \leq 3x \\ \hline -2 \leq x \end{array} \quad \textcircled{x \leq 1} \quad \begin{array}{r} 3x \leq 3 \\ \hline x \leq 1 \end{array}$$

$0 \leq 1$



between

$$\begin{array}{r} -4 \leq 3x + 2 \leq 5 \\ -2 \quad \quad -2 \quad -2 \\ \hline -6 \leq 3x \leq 3 \\ \hline -2 \leq x \end{array}$$

$$-2 \leq x \leq 1$$

$$\begin{array}{r} -4 \leq -3x + 2 \leq 5 \\ \cdot 2 \quad \quad \cdot 2 \quad \cdot 2 \\ \hline -6 \leq -3x \leq 3 \\ \hline 2 \geq x \geq -1 \end{array}$$

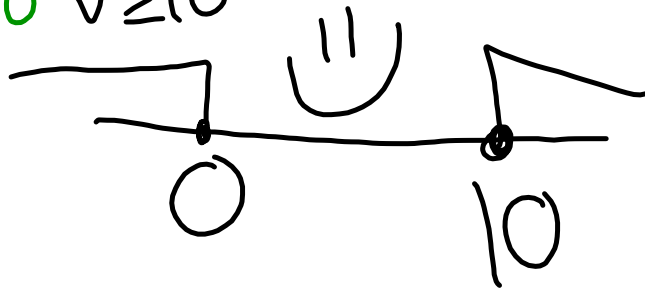
$$3) \quad 7v + \overset{+1}{5} \geq 65 \quad \text{or} \quad -3v + \overset{+1}{2} \geq -2$$

$$\frac{7v + 5 \geq 65}{\frac{7v \geq 60}{v \geq \frac{60}{7}}}$$

$$\frac{-3v + 2 \geq -2}{\frac{-3v \geq -4}{v \leq \frac{4}{3}}}$$

$$5 \geq 10 \quad v \geq 10$$

$$5 \leq -3$$



4)



$$-3 \leq m < 12$$

$$m \geq -3 \text{ and } m < 12$$

5) I'm thinking of a number. Three more than twice my number is less than 17, but at least -1. If my number is an integer, what are the possible values of my number?

Page 342
#14-36 even
Page 344
#59-62 all

