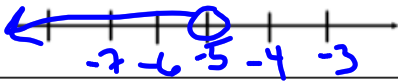


## 7.3 Practice Problem answers

Directions: Solve the inequality. Graph your solution.

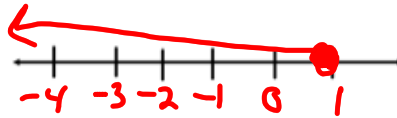
$$1) -2x - 3 > 7$$

$$\begin{array}{r} 13 \quad +3 \\ \hline -2x > 10 \\ \hline -2 \quad -2 \\ \hline x < -5 \end{array}$$



$$2) -8v - 3 \geq -11$$

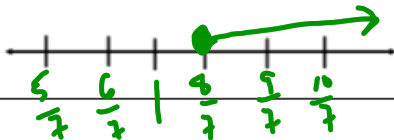
$$\begin{array}{r} +3 \quad +3 \\ \hline -8v \leq -8 \\ \hline -8 \quad -8 \\ \hline v \leq 1 \end{array}$$



$$3) 7(r - 3) \geq -13$$

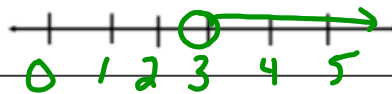
$$7r - 21 \geq -13$$

$$\begin{array}{r} +21 \quad +21 \\ \hline 7r \geq 8 \\ \hline \frac{7r}{7} \geq \frac{8}{7} \\ \hline r \geq \frac{8}{7} \end{array}$$

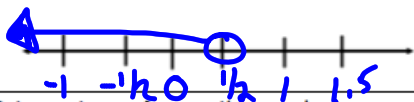


$$4) 4 - 2m > 7 - 3m$$

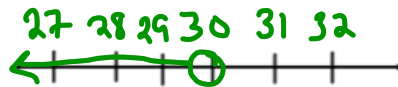
$$\begin{array}{r} +3m \quad +3m \\ \hline 4 + m > 7 \\ \hline -4 \quad -4 \\ \hline m > 3 \end{array}$$



$$\begin{aligned}
 5) \quad & -10p > 6p - 8 \\
 & \underline{-6p \quad -6p} \\
 & -16p > -8 \\
 & \underline{-16} \quad \underline{-16} \\
 & p < \frac{1}{2}
 \end{aligned}$$



$$\begin{aligned}
 6) \quad & \frac{2}{3}d - 2 < \frac{1}{3}d + 8 \\
 & \underline{-\frac{1}{3}d \quad -\frac{1}{3}d} \\
 & \frac{1}{3}d - 2 < 8 \\
 & \underline{+2 \quad +2} \\
 & 3\left(\frac{1}{3}d\right) < 10(3) \\
 & d < 30
 \end{aligned}$$



Directions: Describe and correct the error in solving the inequality.

$$\begin{aligned}
 7) \quad & 17 - 3x \geq 56 \\
 & \underline{-3x \geq 39} \\
 & x \geq -13
 \end{aligned}$$

They divided by a negative so inequality should be reversed.  $x \leq -13$

Directions: Solve the inequality, if possible.

8)  $3p - 5 > 2p + p - 7$

$$\begin{array}{r} 3p - 5 > 2p + p - 7 \\ -2p \quad -2p \\ \hline -5 > -7 \end{array}$$

All solutions

9)  $5(b+9) \leq 5b + 45$

$$\begin{array}{r} 5b + 45 \leq 5b + 45 \\ -5b \quad -5b \\ \hline 45 \leq 45 \end{array}$$

All solutions

10)  $2.2h + 0.4 \leq 2(1.1h - 0.1)$

$$\begin{array}{r} 2.2h + 0.4 \leq 2.2h - 0.2 \\ -2.2h \quad -2.2h \\ \hline 0.4 \leq -0.2 \end{array}$$

No solution

Directions: Translate the verbal phrase into an inequality. Then solve the inequality and graph your solution.

11) Four more than the product of 3 and x is less than 40.

$$3x + 4 < 40$$

$$\begin{array}{r} -4 \quad -4 \\ \hline 3x < 36 \\ \frac{3x}{3} < \frac{36}{3} \end{array}$$

$$x < 12$$

