

1. Find the exact solution for each equation.

a)

$$4 - \frac{8}{3}R = -14$$

$$\begin{array}{r} -4 \quad -4 \\ 4 - \frac{8}{3}R = -14 \\ \hline -\frac{8}{3}R = -18 \\ \hline \frac{-8R}{-8} = \frac{-54}{-8 \div 2} = \left(\frac{27}{4}\right) = (6.75) \end{array}$$

Or you could use  
the reciprocal of  
-8/3

a)

$$4 - \frac{8}{3}R = -14$$

$$-\frac{3}{8} \left( -\frac{8}{3}R \right) = (-18) \left( -\frac{3}{8} \right)$$

$$R = \frac{54}{8} = \left( \frac{27}{4} \right)$$

b)

$$6k + 24 = 4k$$

$$\begin{array}{r} -4k \quad -4k \\ 6k + 24 = 4k \\ \hline 2k + 24 = 0 \\ \hline 2k = -24 \\ \hline \frac{2k}{2} = \frac{-24}{2} \\ k = -12 \end{array}$$

OR

b)

$$6k + 24 = 4k$$

$$\begin{array}{r} -6k \quad -6k \\ 6k + 24 = 4k \\ \hline 24 = -2k \\ \hline \frac{24}{-2} = \frac{-2k}{-2} \\ -12 = k \end{array}$$

2. Solve this inequality.

$$6p - 4(p + 2) - 5 > 3p - 13 - p$$

$$\begin{array}{r} 6p - 4p - 8 - 5 > 3p - 13 - p \\ \hline 2p - 13 > 2p - 13 \\ \hline -2p \quad -2p \\ \hline -13 > -13 \end{array}$$


NO SOL

This is not true!

Solve and graph the  
solution:

Check your answer.

$$4 + 3x - 7 > 15$$

$$\begin{array}{r} 3x - 3 > 15 \\ +3 \quad +3 \\ \hline 3x > 18 \\ \hline \frac{3x}{3} > \frac{18}{3} \\ x > 6 \end{array}$$


Solve and graph the solution:

$$\begin{array}{r}
 7 - 2x > 23 \\
 -7 \quad -7 \\
 \hline
 -2x > 16 \\
 \div 2 \quad \div 2 \\
 \hline
 x > -8 \\
 \text{---} \\
 x < -8
 \end{array}$$

Check your answer.

$  \begin{array}{l}  \text{Starting point} \\  \text{TEST } -8 \checkmark \\  \hline  7 - 2(-8) = \\  7 + 16 \\  23 = 23 \\  \text{Starting point} \\  \text{is ok}  \end{array}  $	$  \begin{array}{l}  \text{Directions} \\  \text{TEST zero} \\  \hline  7 - 2(0) \\  7 > 23 \\  \text{X} \\  \text{Direction} \\  \text{is wrong}  \end{array}  $
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When solving INEQUALITIES:

- Take all the same steps as if it were an EQUATION
- If you multiply or divide both sides by a NEGATIVE you must FLIP the inequality symbol.