



- Remember, we solve these just like equations
- You will have to graph your answer on a number line
- Don't forget the special rule when you multiply and divide by a negative





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$$\begin{array}{c}
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\begin{array}{c}
\begin{array}{c}
\end{array}{} 3\left(2-x\right) < (0-3\left(x-6\right) \\ 6-3x < 210-3x+18 \end{array} & \begin{array}{c}
\end{array}{} 2x-4 & 2 & 5x+2 \end{array} \\ 
\begin{array}{c}
\begin{array}{c}
\end{array}{} 6-3x < 28 & -3x \\ +3x & +3x \end{array} & \begin{array}{c}
\end{array}{} 2x-4 & 2 & -5x+2 \end{array} \\ 
\begin{array}{c}
\begin{array}{c}
\end{array}{} 2x-4 & 2 & -30x+12 \\ +30x & +30x \end{array} \\ 
\begin{array}{c}
\end{array}{} 32x-4 & 2 & -30x+12 \\ +30x & +30x \end{array} \\ 
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\end{array}{} 32x-4 & 2 & -30x+12 \\ +30x & +30x \end{array} \\ 
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\end{array}{} 32x-4 & 2 & -30x+12 \\ +30x & +30x \end{array} \\ 
\begin{array}{c}
\end{array}{} 32x-4 & 2 & -30x+12 \\ -3x & -4 & 2 & 12 \\ -3x & -3x & -3x \\ -3$$

6

$$7. \frac{1}{3} (4x + 3) \ge \frac{2}{3}x + 2$$

$$4x + 1 \ge \frac{2}{3}x + 2$$

$$-\frac{2}{3}x - \frac{2}{3}x$$

$$-\frac{2}{3}x - \frac{2}{3}x$$

$$\frac{2}{3}x + 1 \ge 2$$

$$-\frac{1}{3} - \frac{2}{3}x \ge 1 - 3$$

$$2x \ge 3$$

$$2x \ge 3$$

$$x \ge 3/2$$

$$x \ge 1 - 5$$

$$1 - \frac{1}{1 - 5} = \frac{1}{2}$$

A shipping container will be used to transport several 100-kilogram crates across the country by rail. The greatest weight that can be loaded into the container is 25500 kilograms. Other shipments weighing a total of 9600 kilograms have already been loaded into the container. Write and solve an inequality which can be used to determine x, the number of 100-kilogram crates that can be loaded into the shipping container.



A rental car company charges \$51.20 per day to rent a car and \$0.12 for every mile driven. Jerry wants to rent a car, knowing that:

- He plans to drive 200 miles.
- He has at most \$280 to spend.

Write and solve an inequality which can be used to determine d, the number of days Jerry can afford to rent while staying within his budget.

$$51.20d + 01200) \leq 280$$
  
 $51.20d + 24 \leq 280$   
 $-24 - 24$   
 $51.20d \leq 256$   
 $51.20 \leq 51.20$   
 $d \leq 5$ 

$$\begin{bmatrix}
 0n - 7(n + 2) & 7 & 5n - 12 \\
 \frac{10n - 7n - 14}{3n - 14} & 5n - 12 \\
 \frac{3n - 14}{5n - 12} \\
 \frac{-3n}{-14} & -12 \\
 \frac{+12}{+12} & -\frac{1}{2} & -\frac{1}{2} \\
 \frac{-2}{2} & 2n \\
 \frac{-2}{2} & 2n \\
 -(-7n) & -2 & -1 & 0
 \end{bmatrix}$$