

Write and Solve.

Five less than six times a number is less than or equal to twenty five.

$$\begin{array}{r|l} 6x - 5 \leq 25 & \\ +5 & +5 \\ \hline 6x \leq 30 & \\ \hline x \leq 5 & \end{array}$$

Four more than three times a number is greater than nineteen.

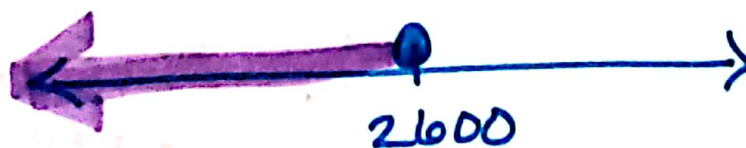
$$\begin{array}{r|l} 4 + 3x > 19 & \\ -4 & -4 \\ \hline 3x > 15 & \\ \hline x > 5 & \end{array}$$

Three more than five times a number is greater than or equal to three more than eight times the number.

$$\begin{array}{r|l} 3 + 5x \geq 3 + 8x & \\ -5x & -5x \\ \hline 3 \geq 3 + 3x & \\ -3 & -3 \\ \hline 0 \geq 3x & \\ \hline x \leq 0 & \end{array}$$

The NASA Solar Probe can withstand temperatures up to and including 2600°F. Write and graph an inequality that represents the temperatures the probe can withstand.

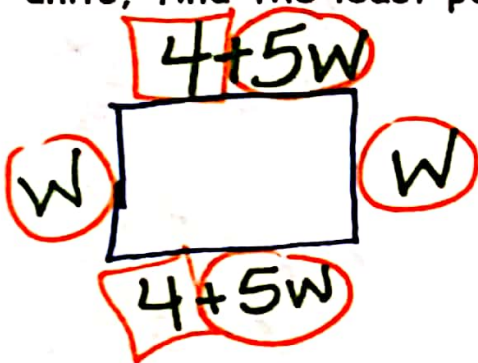
$$t \leq 2600$$



Mario is the manager at a local pizza shop. He has budgeted \$1600 for the wages of the cashiers for the week. If each cashier makes \$8.75 an hour, how many total hours can cashiers work that week?

$$\begin{array}{r} 8.75x \leq 1600 \\ \hline 8.75 \quad | \quad 8.75 \\ \hline x \leq 182.86 \end{array}$$

A rectangle has a length at least four more than five times the width. If the perimeter is greater than or equal to 32 units, find the least possible width and length.



Perimeter - sum of all sides

$$\begin{array}{r} 12W + 8 \geq 32 \\ -8 \quad | \quad -8 \\ \hline 12W \geq 24 \\ \hline 12 \quad | \quad 12 \\ \hline W \geq 2 \end{array}$$

Smallest units

$$\begin{array}{l} W = 2 \\ L = 14 \end{array}$$

$$\begin{array}{l} L = 4 + 5W \\ = 4 + 5(2) \\ = 14 \end{array}$$