

### 1.3 More Inequalities

1. The length of time Julie spent on the treadmill is 4 minutes less than she spent on the bike. The length of time Julie spent on the rowing machine is twice the length of time she spent on the bike. The total length of time Julie worked out is at least 24 minutes. Write an inequality to model the situation.

$$\begin{aligned} \text{let } x &= \text{time on bike} \\ x-4 &= \text{time on treadmill} \\ 2x &= \text{time on rowing machine} \\ \text{bike} + \text{treadmill} + \text{rower} \\ x + (x-4) + 2x &\geq 24 \end{aligned}$$

2. The length of a rectangular garden is 3 less than twice the width of the garden. If the perimeter is a maximum of 400 feet, what is the possible width of the garden?

Write an inequality for the situation.

$$\begin{aligned} \text{let } x &= \text{the width of the garden} \\ 2x-3 &= \text{the length of the garden} \\ \text{*less than - subtract} \\ \text{is less than - } < & P = 2l + 2w \\ & 2l + 2w = P \\ & 2(2x-3) + 2(x) \leq 400 \end{aligned}$$

# HOMEWORK

Worksheet HW 1.3  
More Inequalities