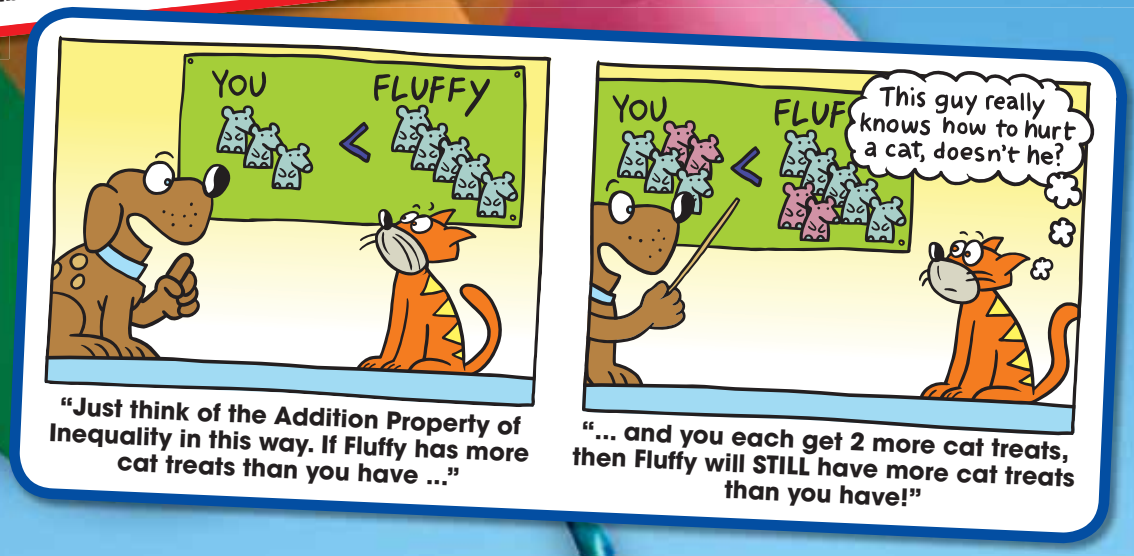
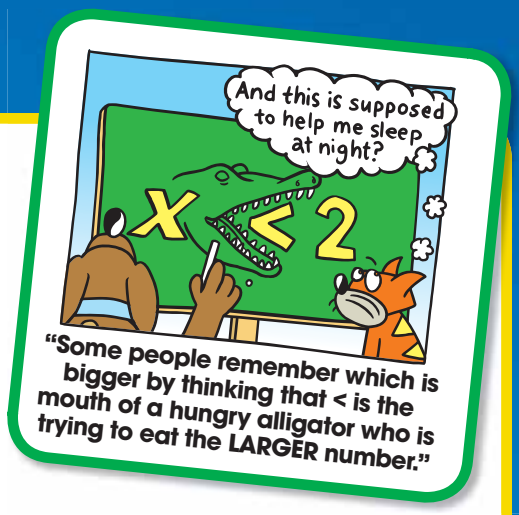
English Spanish

8 Linear Inequalities



English Spanish

What You Learned Before



Comparing Real Numbers

Complete the number sentence with <, >, or =.

Example 1 $\frac{1}{3}$ ☐ 0.3

$\frac{1}{3} = \frac{10}{30}$, $0.3 = \frac{3}{10} = \frac{9}{30}$

Because $\frac{10}{30}$ is greater than $\frac{9}{30}$, $\frac{1}{3}$ is greater than 0.3.

∴ So, $\frac{1}{3} > 0.3$.

Example 2 $\sqrt{6}$ ☐ 6

Use a calculator to estimate $\sqrt{6}$.

$\sqrt{6} \approx 2.45$

Because 2.45 is less than 6, $\sqrt{6}$ is less than 6.

∴ So, $\sqrt{6} < 6$.

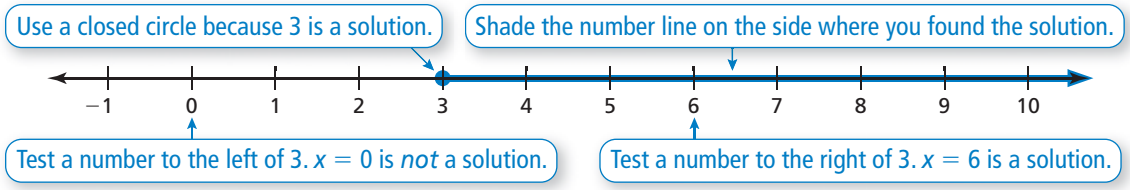
Try It Yourself

Complete the number sentence with <, >, or =.

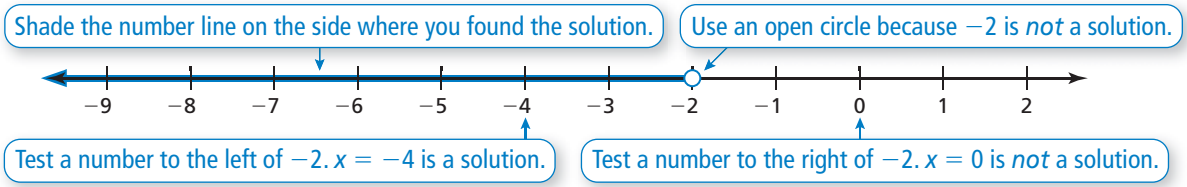
1. $\frac{1}{4}$ ☐ 0.25 **2.** 0.1 ☐ $\frac{1}{9}$ **3.** π ☐ $\sqrt{10}$

Graphing Inequalities

Example 3 **Graph $x \geq 3$.**



Example 4 **Graph $x < -2$.**



Try It Yourself

Graph the inequality.

4. $x \geq 0$ **5.** $x < 6$ **6.** $x \leq -4$ **7.** $x > -10$