

## 3.4

## Technology Activity

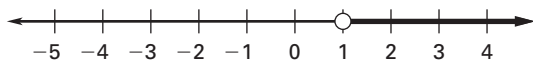
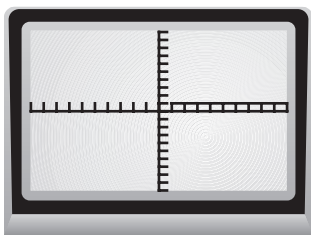
For use with pages 138–142

**GOAL** Graph an inequality using a graphing calculator.**EXAMPLE** Graph  $x - 4 > -3$  using a graphing calculator.Solve and graph  $x - 4 > -3$ . Then check your solution using a graphing calculator.**Solution****1** Solve the inequality.

$$x - 4 > -3 \quad \text{Write original inequality.}$$

$$x - 4 + 4 > -3 + 4 \quad \text{Add 4 to side.}$$

$$x > 1 \quad \text{Simplify.}$$

**Answer:** The solution is  $x > 1$ .**2** Now check your solution using the following keystrokes on a graphing calculator.**Keystrokes**
 $\boxed{Y=}$   $\boxed{x}$   $\boxed{-}$   $\boxed{4}$   $\boxed{2nd}$   $\boxed{[CATALOG]}$  arrow up to  $\boxed{>}$   $\boxed{ENTER}$   $\boxed{(-)}$   $\boxed{3}$   $\boxed{GRAPH}$ 
**3** Compare the graph you sketched above to the graphing calculator screen.**Check:** Both graphs represent all numbers greater than one. Your solution checks. ✓**DRAW CONCLUSIONS** Solve and graph the inequality. Then check your solution using a graphing calculator.

1.  $x + 10 < -5$

2.  $41 + x \leq 2$

3.  $x - 22 > -21$

4.  $x - 36 \geq 7$

5.  $2.93 + x + 4 \geq 2$

6.  $17.1 > 3 + x - 5.2$

7.  $32.3 \geq 5 + x - 12.6$

8.  $6.28 + x - 8.9 < 12$