

# Lesson 5.5 • Inequalities in One Variable

Name \_\_\_\_\_ Period \_\_\_\_\_ Date \_\_\_\_\_

1. Tell what operation on the first inequality gives the second inequality, and give the answer using the correct inequality symbol.

a.  $4 < 8$

$4 + 3 \square 8 + 3$

b.  $-3 < -2$

$-3 - 5 \square -2 - 5$

c.  $5 > -9$

$5(-2) \square (-9)(-2)$

d.  $-4 > -7$

$5(-4) \square 5(-7)$

e.  $m \leq 6$

$-2m \square 6(-2)$

f.  $w > -1$

$w - 8 \square -1 - 8$

2. Find three values of the variable that satisfy each inequality.

a.  $x - 2 > -5$

b.  $x + 4 \leq 11$

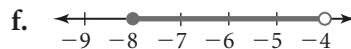
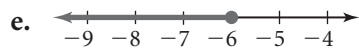
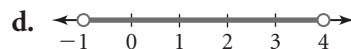
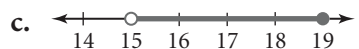
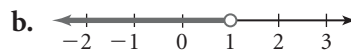
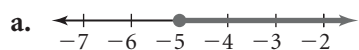
c.  $x + 5 \geq -2.7$

d.  $7 - x < 6$

e.  $9 - x \geq 6.2$

f.  $-x - 3 > 2$

3. Give the inequality graphed on each number line.



4. Translate each phrase into symbols.

a.  $x$  is no more than 11

b.  $y$  is at least  $-3$

c.  $t$  is at most 27

d.  $m$  is not less than 6

5. Solve each inequality and graph the solution on a number line.

a.  $10x + 3.3 \leq -1$

b.  $17.2 - 2.6x > 3$

c.  $6 + 3(x - 5) > 18$

d.  $8(5 - x) + 12.5 < 16$

e.  $6x - (4 - 3x) < 9x - 8$

f.  $-3.4(x - 1) + 1.2 \geq 4.8x + 0.5$