Name

Class

Date

Solving Inequalities

**Write the inequality that represents the sentence.**

**1.** Twice a number is at least 15.

**2.** The quotient of a number and 8 is at most   
negative 6.

**Solve each inequality. Graph the solution.**

**3.** 5*t* – 2(*t +* 2) ≥ 8 **4.**  **5.** −2(*w* – 7) + 3 > *w* – 1

**Is the inequality *always*, *sometimes,* or *never* true?**

**6.** 2(*x −* 1) ≥ *x +* 7 **7.** 5(*x −* 3) < 2(*x −* 9)

**Solve each compound inequality. Graph the solution.**

**8.** 4*x* ≥ − 12 and 7*x ≤* 7 **9.** 2*x* > 3 − *x* or 2*x* < *x −* 3

**Solve each problem by writing and solving a compound inequality.**

**10.** Before a chemist can combine a solution with other liquids in a laboratory, the temperature of the solution must be between 39°C and 52°C. The chemist places the solution in a warmer that raises the temperature 6.5°C per hour. If the temperature is originally 0°C, how long will it take to raise the temperature to the necessary range of values?