

# Writing and Solving Inequalities Homework

**Write and solve each inequality.**

- 1) You want to make a rectangular banner that is 18 ft long. You have no more than 48 ft of trim for the banner.
- Write an inequality to represent the situation.
  - What are the possible widths of the banner?

- 2) Your cell phone plan costs \$39.99 per month plus \$.15 for each text message you send or receive. You have at most \$45 to spend on your cell phone bill.
- What inequality can you use to find the maximum number of text messages that you can send or receive?
  - What is the maximum number of text messages that you can send or receive next month?

- 3) The average normal body temperature for humans is  $98.6^{\circ}\text{F}$ . An abnormal increase in body temperature is classified as hyperthermia, or fever. Write an inequality that represents the body temperature in degrees Celsius of a person with hyperthermia. (*Hint: To convert from degree Celsius to degrees Fahrenheit use the formula  $F=9/5C + 32$* )

- 4) A family decides to rent a boat for the day while on vacation. The boat's rental rate is \$500 for the first two hours and \$50 for each additional half hour. Suppose the family can spend \$700 for the boat. Write an inequality to represent the number of hours for which they can rent the boat.