Section 7.7 Quadratic Equations and Problem Solving

# Objective 1: Solving Problems Modeled by Quadratic Equations

Some problems can be modeled by quadratic equations.

a. An object is thrown upward from the top of an -foot building with an initial velocity of feet per second. The height of the object, in feet, seconds after it is thrown is given by the equation . When will the object hit the ground?

b. The length of a rectangle is centimeters less than five times its width. The area of the rectangle is square centimeters. Find the dimensions of the rectangle.

c. Find the length of the shorter leg of a right triangle if the longer leg is feet more than the shorter leg and the hypotenuse is feet less than twice the shorter leg.