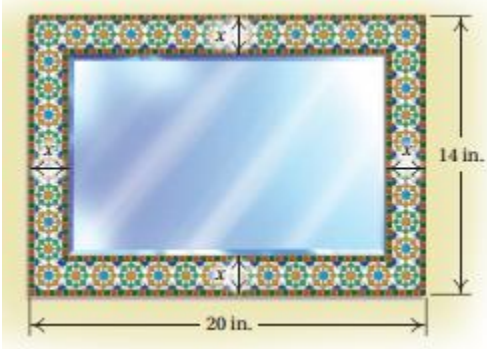# 20.3 Applications Involving Quadratic Equations

## Methods for Solving Quadratic Equations

1. Factoring (Sec. 14.8)
2. Square root property (Sec. 20.1)
3. Completing the square (Sec. 20.1)
4. Quadratic formula (Sec. 20.2)

❖ **Solve Applications Using the Appropriate Method**

**Ex.** A right triangle has side lengths that are consecutive even integers. Use Pythagorean Theorem to find the lengths of those sides.

**Ex.** (#9) The outside of a mosaic mirror frame measures 14 in. by 20 in., and 160 $in^2$ of mirror shows. Find the width of the frame.

**Ex.** (#30) The Hudson River flows at a rate of 3mph.  A patrol boat travels 60 mi upriver and returns in a total time of 9 hr.  What is the speed of the boat in still water?  Round to the nearest tenth.