Applications of Quadratic Equations

For the following problems: a. Define a variable  
b. Write an equation  
c. Solve the equation  
d. Answer the question.

1. Find two consecutive integers whose product is 72.
2. Find two consecutive even integers whose product is 24 more than eight times the larger integer.
3. Find two consecutive odd integers whose product is 95 more than twice their sum.
4. The length of a rectangle is 5 feet more than the width. If the area of the rectangle is 36 square feet, what are the dimensions of the rectangle?
5. The width of a rectangle is 3 feet less than the length. If the area of the rectangle is 88 square feet, what are the dimensions of the rectangle?
6. The length of a rectangle is 3 yards more than twice the width. If the area of the rectangle is 77 square yards, what are the dimensions of the rectangle?
7. The base of a triangle is 5 feet longer than the height. Find the base and the height if the area of the triangle is 42 square feet.
8. The base of a triangle is 3 meters less than twice the height. Find the base and height if the area of the triangle is 22 square meters.
9. The height of a triangle is 2 feet more than twice the base. Find the base and height if the area of the triangle is 20 square feet.