

**Algebra I Worksheet #6 Unit 12 page 1** \_\_\_\_\_

Solve each of the following problems algebraically. Show your work neatly organized.

1. One number is one more than two times another. Their product is six. What are the numbers?

2. One number is equal to the square of another. Their sum is 6. What are the numbers?

3. One number is one more than three times another. The sum of their squares is 29. What are the numbers?

4. Find two consecutive odd integers whose product is 23 more than their sum.

## Algebra I Worksheet #6 Unit 12 page 2

Solve each of the following problems algebraically. Show your work neatly organized.

5. The length of a rectangle is three inches more than twice its width. The area of the rectangle is 20 square inches. What are the dimensions of the rectangle?

6. One leg of a right triangle is two inches shorter than the hypotenuse. The other leg is one inch shorter than the hypotenuse. Find the length of each side of the triangle.

7. One leg of a right triangle is seven inches longer than the other. The length of the hypotenuse is two inches less than three times the length of the shorter leg. Find the length of each side of the triangle.

8. A rectangular photograph that is 10 inches long and 8 inches wide is surrounded by a border of uniform width. Find the width of the border if its area is 115 square inches.