JMJ

Name: _____ Date: _____

Algebra I

Directions: Set up let statements, draw corresponding pictures, write an equation, and solve.

1. The area of a rectangle is 12 in^2 more than the area of a square. If the length of the rectangle is 4 inches more than the side of the square and the width of the rectangle is 2 inches less than the side of the square, find the measure of a side of the square.

2. The width of a rectangle is 3 mm less than its length. If the length is decreased by 5 mm, and the width is increased by 7 mm, the area is unchanged. Find the dimensions of both figures.

3. The width of a rectangle is 2 cm less then length of the rectangle. If the length is increased by 6 cm and the width is decreased by 4 cm, the areas are unchanged. Find the dimensions of both figures.

4. The area of a square exceeds the area of a rectangle by 1 sq. in. If the length of the rectangle is 5 in. more than the side of the square, and the width is 2 in. less than the side of the square, find the dimensions of both figures.

5. The length of a rectangular garden exceeds the width by 8 ft. If the length is increased by 4 ft. and the width is decreased by 2 ft., the area of the original garden is 8 sq. ft. more than the area of the new garden. Find the dimensions of the original garden.

6. If one side of a square is increased by 6 in., and an adjacent side is decreased by 4 in., the areas of both shapes are the same. Find the dimensions of both shapes.