Name: _____   Date: _____

Algebra I

Directions: Answer the following questions algebraically making sure to set up let statement(s), and an equation. Show all work.

1. The length of a rectangle is 6 centimeters more than its width. The perimeter is 48 centimeters. Find the dimensions of the rectangle.

2. The length of a rectangle is 2 times its width. The perimeter of the rectangle is 24 meters. Find the dimensions of the rectangle.

3. The perimeter of a triangle is 90 inches. The length of the second side exceeds twice the length of the first side by 3 inches, and the length of the third side is 1 inch less than the length of the second side. Find the length of each side of the triangle.

4. The perimeter of a rectangular garden is 140 meters. Find its dimensions, if the length is 5 meters less than twice the width.

5. In an isosceles triangle whose perimeter is 72 centimeters, the length of each of the equal sides is 4 times the length of the third side. Find the length of each side of the triangle.

6. The length of a rectangle is twice the width. If the length is increased by 6 inches and the width is diminished by 2 inches, a new rectangle is formed whose perimeter is 68 inches. Find the dimensions of the original rectangle.

7. If the length of one side of a square is increased by 5 centimeters and the length of an adjacent side is multiplied by 2, the perimeter of the resulting rectangle is 2 times the perimeter of the square. Find the length of a side of the original square.

8. A side of a square measures 5 yards more than the side of an equilateral triangle. The perimeter of the square is 22 yards more than the perimeter of the equilateral triangle. Find the length of the side of the triangle.

9. The length of a rectangle exceeds its width by 8 inches. If the width is doubled and the length is decreased 4 inches, the perimeter of the new and original rectangles are the same. Find the dimensions of the original rectangle.

10. The length of a side of an equilateral triangle exceeds the length of a side of a square by 12 meters. The perimeter of the square exceeds the perimeter of the triangle by 60 meters. Find the length of a side of the square and the length of a side of the triangle.