**2.5 Polynomial Applications**

1) A box is constructed such that the length is twice the width and the height is 2 cm longer than the width. The volume of the box is $350 cm^{3}$. Find the dimensions of the box.

2) A rectangular prism has dimensions 10 cm by 10 cm by 5 cm. When the dimensions are increased by the same amount, the new volume is $1008 cm^{3}$. What are the dimensions of the new prism?

3) A right triangle has the hypotenuse 1 cm longer than one of the sides. Find the length of the sides if the area of the triangle is $6 cm^{2}$.