**4.4 Applied Maximum and Minimum Problems**

**Optimization –**

**Steps:**

Find two positive numbers whose product is 10000 and whose sum is a minimum.

Find the points on the parabola  that are closest to the point .

A cereal box in the shape of a rectangular prism is required to have a capacity of 5000 cm3, and the thickness of the box must be 10 cm to allow for a comfortable grasp by most people. What dimensions of the box require the minimum amount of materials?