1. Consider the triangle depicted in the figure below. Determine the equations of the lines on which the two upward slanting sides lie. What is the width of the triangle at any height $y$ between 0 and 13?

2a. Suppose that the triangle is the vertical section of a cone that has a circular horizontal cross section at every height. Determine the volume of this cone.

2b. Determine the volume of the solid obtained by revolving the triangle one complete revolution around the $y$–axis.