

MATH 166
MATH ADVENTURES

This problem is based on a question that I received from a government worker in the winter of 2003. He wished to find the volume of an object like the one pictured.

Consider the (3-dimensional) object pictured below. This object is formed by a cylinder placed on top of a truncated cone. Suppose that the height of the cylinder is H and the height of the truncated cone is h . Additionally assume that the radius of the bottom (smaller) circular base of the truncated cone is r and the radius of the cylinder is R . Find a formula for the volume of this monster.

