

**Problem 1.** Find the equation of the line which passes through the points  $(0, h)$  and  $(r, 0)$ .

**Problem 2.** Sketch the cone of height  $h$  and radius  $r$  obtained by revolving this line about the  $y$ -axis.

**Problem 3.** Set up the integral which computes the volume of this cone using the disk method.

**Problem 4.** Set up the integral which computes the volume of this cone using the shell method.

**Problem 5.** Compute one of these integrals.