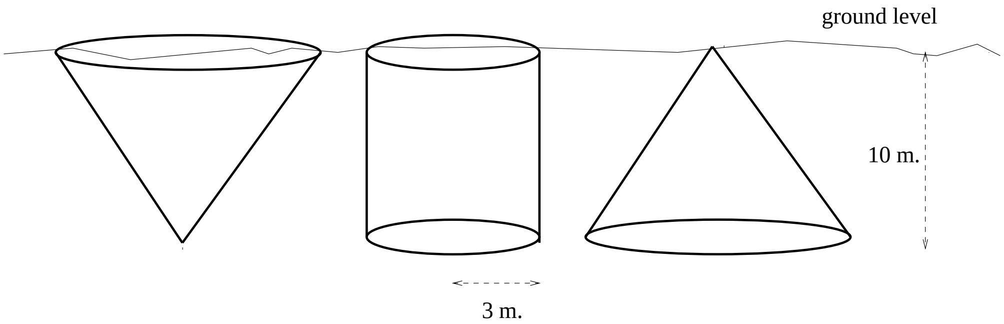
Another calculus problem for 640:192:03

Toxic waste (a homogeneous liquid whose density is 300 $\mathrm{kg/m^3}$) is stored in three buried containers. Each container, illustrated below, is 10 meters tall. The top of each container is at ground level. Each container has the *same* volume. The middle container is a cylinder, and the other two are circular cones. Which container needs the *least* amount of work to empty (that is, to pump the toxic waste to ground level)? Which container needs the *most* work to empty? Justify your assertions by computing the work necessary in each case.



Toxic waste containers

Note: the volume of a cylinder with base radius r and height h is $\pi r^2 h$; the volume of a cone with base radius r and height h is $\dfrac{1}{3}\pi r^2 h$.