

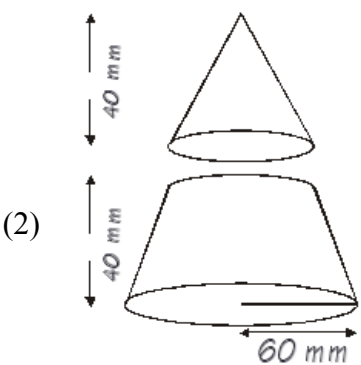
1. A solid wooden cone has a height of 80 mm and a base radius of 60 mm.
- (a) Find the volume of the cone. Give your answer as a multiple of π .

.....(2)

The top of the cone is cut off, to form a smaller cone and a frustum.

The height of the smaller cone and the height of the frustum are both 40 mm. The base radius of the smaller cone is 30 mm.

- (b) Show that the volume of the frustum is $84\,000\pi\text{ mm}^3$.



- (c) Find the total surface area of the frustum.
- Give your answer as a multiple of π .

..... mm^2 (5)

2. The radius of a sphere is 3 cm. The radius of the base of a cone is also 3 cm.
- The volume of the sphere is 3 times the volume of the cone.
- Work out the curved surface area of the cone. Give your answer as a multiple of π .

..... mm^2 (7)