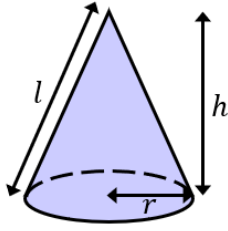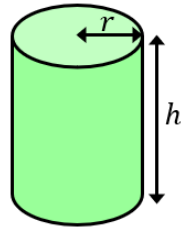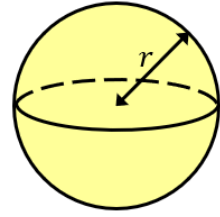# Volume of Cylinders, Cones and Spheres
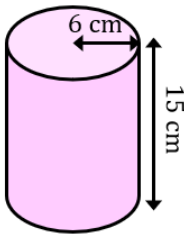
Volume of Cone $= \frac{1}{3}\pi r^2 h$

Volume of Cylinder $= \pi r^2 h$

Volume of Sphere $= \frac{4}{3}\pi r^3$
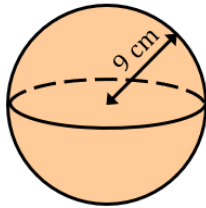
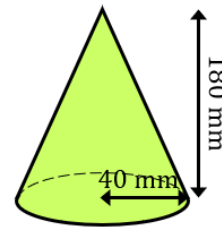**(a)** Find the volume, giving your answer in terms of π

6 cm
15 cm

(b) Find the volume, giving your answer to the nearest cm^3
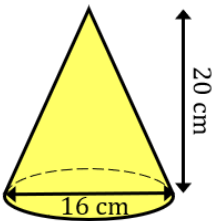
9 cm

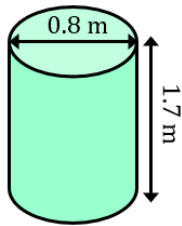**(c)** Find the volume, giving your answer to 3 significant figures

180 mm
40 mm

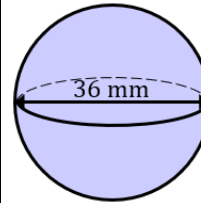**(d)** Find the volume, giving your answer to 3 significant figures

20 cm
16 cm

(e) Find the volume, giving your answer to 2 decimal places

0.8 m
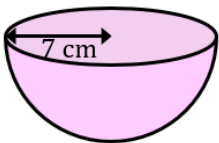1.7 m

(f) Find the volume, leaving your answer in terms of π

36 mm

(g) Find the volume of the hemisphere to the nearest cm^3

7 cm

(h) The cone has a volume of 39π cm^3. Find the height h.
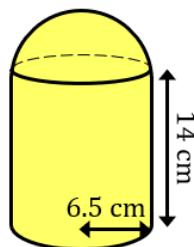
h cm
3 cm
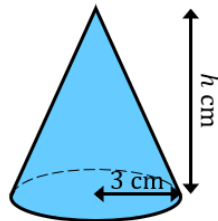
(i) The cylinder has a volume of 6100 mm^2. Find its radius to the nearest mm.

r mm
24 mm
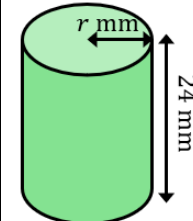
(j) A shape is made by joining a hemisphere to a cylinder. Both have a radius of 6.5 cm. Find the total volume of the shape.

14 cm
6.5 cm

(k) A shape is made by joining a cone to a hemisphere, where both shapes have the same radius. The total volume is 402π cm^3. Find the height of the cone.

h cm
6 cm