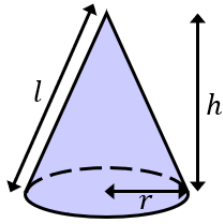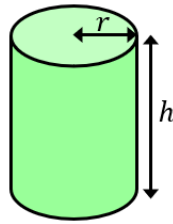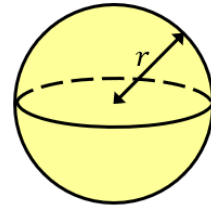# Surface Areas of Cylinders, Cones and Spheres

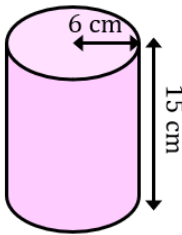Curved Surface Area of Cone
$= \pi r l$

Curved Surface Area of Cylinder
$= 2\pi r h$

Surface Area of Sphere
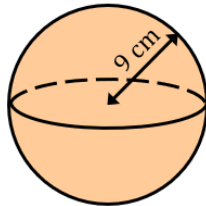$= 4\pi r^2$

(a)
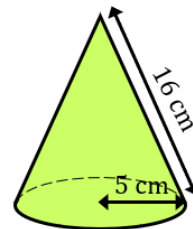Find the curved surface area, giving your answer in terms of π

6 cm
15 cm

(b)
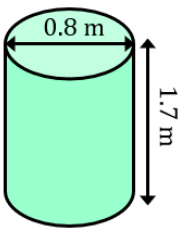Find the surface area, giving your answer to 3 significant figures

9 cm

(c)
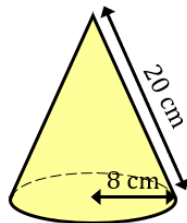Find the curved surface area giving your answer to the nearest cm^2

16 cm
5 cm

(d)
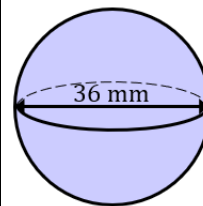Find the **total** surface area, giving your answer to 2 decimal places

0.8 m
1.7 m

(e)
Find the **total** surface area, giving your answer to the nearest cm^2
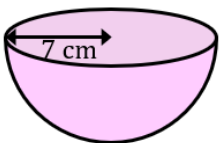
20 cm
8 cm

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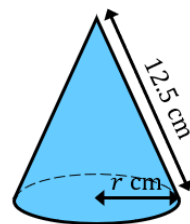Find the surface area, leaving your answer in terms of π

36 mm

(g)
Find the total surface area of the hemisphere, leaving your answer in terms of π
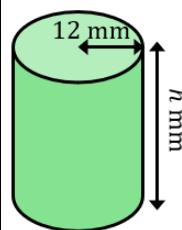
7 cm

(h)
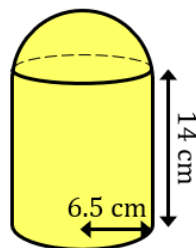The cone has a curved surface area of 177 cm^2. Find the radius r to 1 decimal place.

12.5 cm
r cm

(i)
The total surface area is 744π mm^2. Find the height of the cylinder.

12 mm
h mm

(j)
A shape is made by joining a hemisphere to a cylinder. Both have a radius of 6.5 cm. Find the surface area of the compound shape to the nearest cm^2.

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 surface area is 246π cm^2. Find the slanted height l of the cone.

l cm
6 cm