

TASK 3.9

Remember

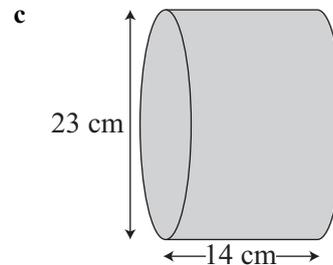
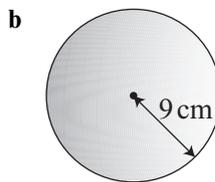
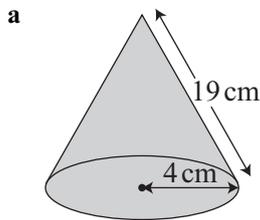
sphere
surface area = $4\pi r^2$

cylinder
curved surface area = $2\pi rh$

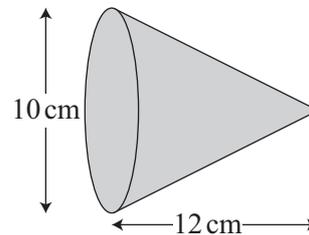
cone
curved surface area = πrl
where l is the slant height

In this task, give answers to 3 significant figures where necessary.

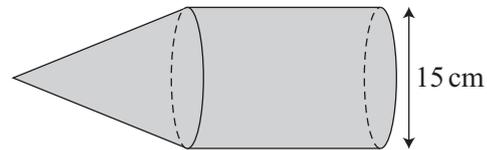
1. Find the *curved* surface area of each solid.



2. Find the *total* surface area of this cone, leaving your answer in terms of π .



3. A sphere has a surface area of 480 cm^2 . Calculate its diameter.
4. The curved surface area of a hemisphere is $72\pi \text{ cm}^2$. What is the *total* surface area of the hemisphere?
5. A cone is attached to a cylinder of diameter 15 cm as shown. The perpendicular heights of the cylinder and the cone are both equal to the diameter of the cylinder. Find the *total* surface area of the combined solid.



6. A cylinder has a radius of 2 cm and a height of 10 cm. A cone has a radius of 3 cm. The total surface area of the cone is equal to the total surface area of the cylinder. Show that the perpendicular height of the cone is $4\sqrt{10}$ cm.