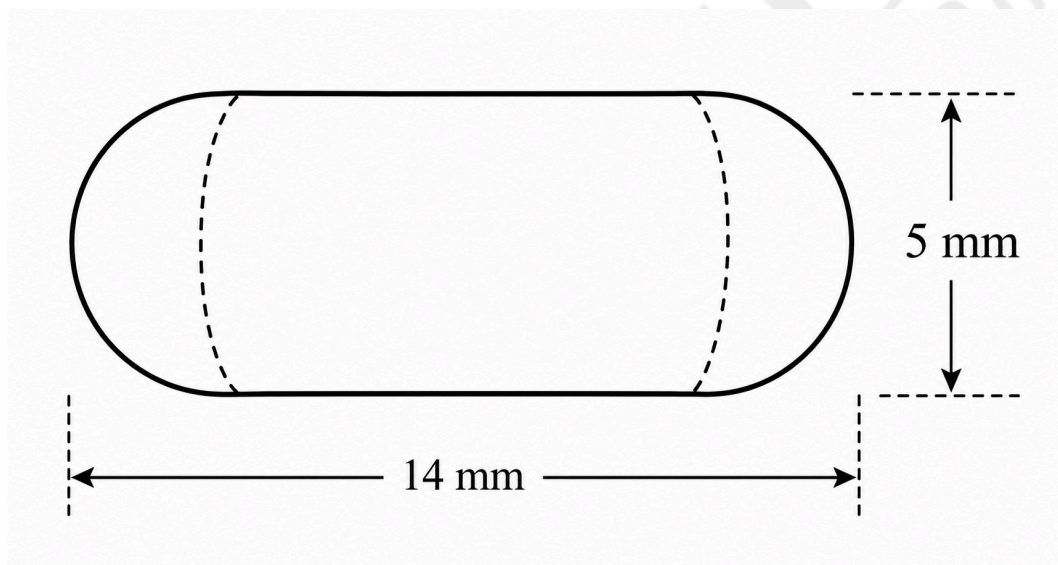


## Class 10 Mathematics - Surface Areas and Volumes

Name: \_\_\_\_\_

Date: \_\_\_\_\_

### Advanced Worksheet 1



### Questions

1. Find the radius of the capsule.
2. Find the length of the cylindrical portion.
3. Find the total surface area of the capsule.
4. Find the volume of the capsule.
5. Which solids are combined to form the capsule?
6. Why are the circular faces of the cylinder not included in the surface area?

## Answer Key

1. 2.5 mm
2.  $14 - 5 = 9$  mm
3.  $TSA = 2\pi rh + 4\pi r^2$   
 $= 2 \times (22/7) \times 2.5 \times 9 + 4 \times (22/7) \times (2.5)^2$   
 $= 220$  mm<sup>2</sup>
4.  $Volume = \pi r^2 h + (4/3)\pi r^3$   
 $= 176.79 + 65.45$   
 $= 242.24$  mm<sup>3</sup>
5. Cylinder and two hemispheres.
6. They are covered by the hemispheres.