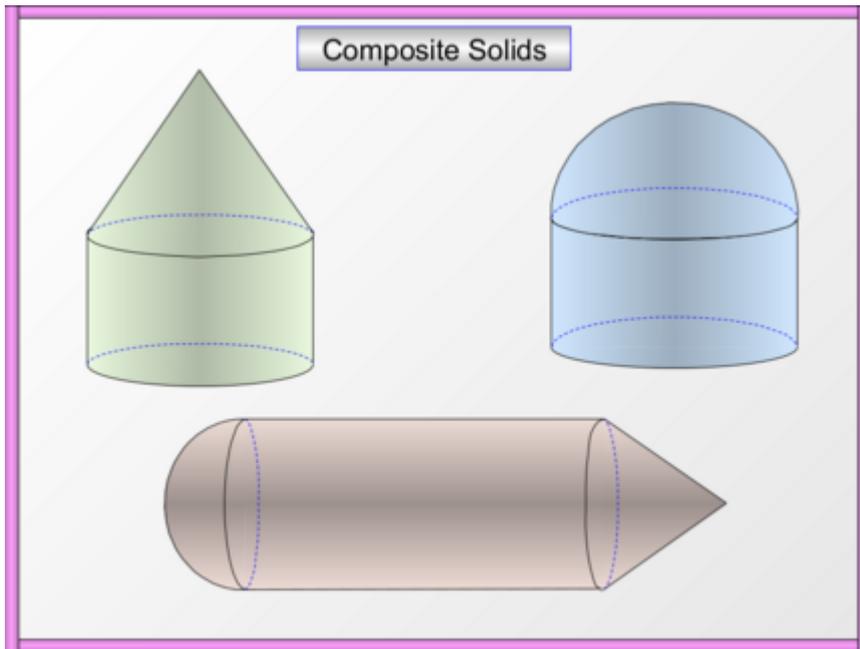


# experTUT

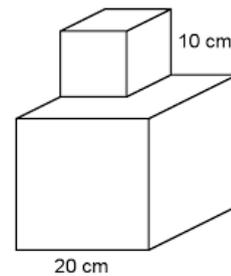
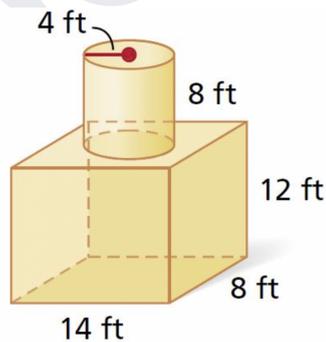
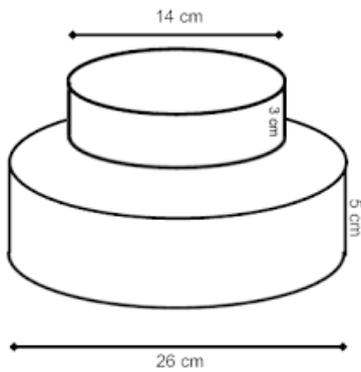
Discuss the edge length, all kind of diagonals, Curved/Lateral/Total surface area and volumes of :

1. Cuboid
2. Cube
3. Cylinder
4. Hollow Cylinder
5. Cone
6. Frustum of a cone
7. Sphere
8. Hemisphere
9. Hollow Sphere
10. Triangular prism

11. Discuss the surface area and volume of the following solids :



12. Find out the TSA and Volume of the following solids :



13. A cylindrical tube opened at both the ends is made of iron sheet which is 2 cm thick. If the outer diameter is 16 cm and its length is 100 cm, find how many cubic centimetres of iron has been used in making the tube ?

14. A semi-circular sheet of metal of diameter 28cm is bent to form an open conical cup. Find the capacity of the cup.

15. A cloth having an area of  $165 \text{ m}^2$  is shaped into the form of a conical tent of radius 5 m (i) How many students can sit in the tent if a student, on an average, occupies  $5/7 \text{ m}^2$  on the ground? (ii) Find the volume of the cone.
16. The water for a factory is stored in a hemispherical tank whose internal diameter is 14 m. The tank contains 50 kilolitres of water. Water is pumped into the tank to fill to its capacity. Calculate the volume of water pumped into the tank.
17. The volumes of the two spheres are in the ratio 64 : 27. Find the ratio of their surface areas.
18. A cube of side 4 cm contains a sphere touching its sides. Find the volume of the gap in between.
19. A sphere and a right circular cylinder of the same radius have equal volumes. By what percentage does the diameter of the cylinder exceed its height ?
20. 30 circular plates, each of radius 14 cm and thickness 3cm are placed one above the another to form a cylindrical solid. Find : (i) the total surface area (ii) volume of the cylinder so formed.