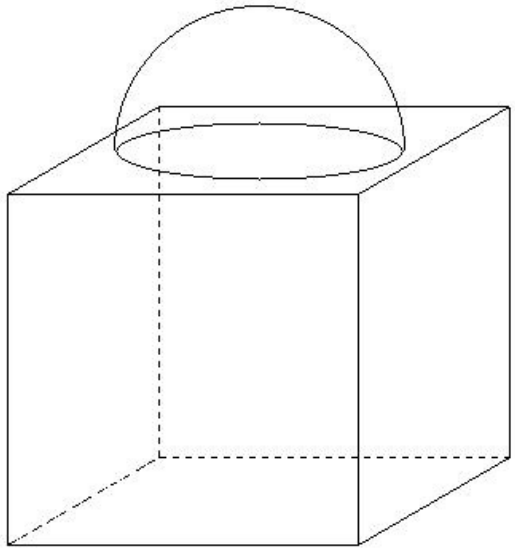
EduSahara™ Assignment

Name : Surface Area of a Combination of Solids

Chapter : Surface Areas and Volumes

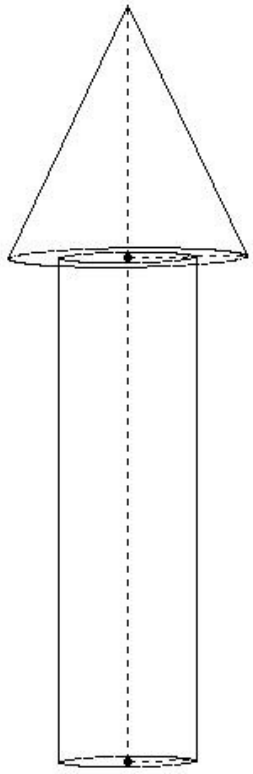
Grade : CBSE Grade X

1. If two solids, a cube and a hemisphere are combined such that the base of the block is a cube with edge 22.00 cm and the hemisphere fixed on the top has a diameter of 18.00 cm, find the total surface area of the block.



(i) 2878.57 sq.cm (ii) 3118.57 sq.cm (iii) 3158.57 sq.cm (iv) 3288.57 sq.cm (v) 3338.57 sq.cm

2. A wooden toy rocket is in the shape of a cone mounted on a cylinder. The height of the conical part is 15.00 cm , while the height of the cylindrical part is 30.00 cm. The base of the conical portion has a diameter of 14.00 cm while the base diameter of the cylindrical portion is 8.00 cm. If the conical portion is painted with red and cylindrical portion with black, find the area of the rocket painted with each of these colors

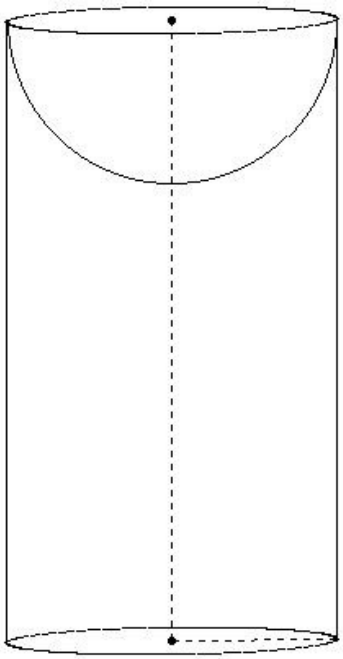


(i) red area = 466.81 sq.cm , black area = 803.57 sq.cm (ii) red area = 465.81 sq.cm , black area = 802.57 sq.cm

(iii) red area = 469.81 sq.cm , black area = 806.57 sq.cm (iv) red area = 468.81 sq.cm , black area = 805.57 sq.cm

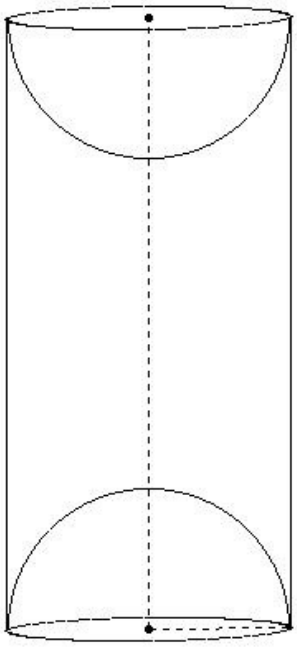
(v) red area = 467.81 sq.cm , black area = 804.57 sq.cm

3. A hemispherical depression is cut out from one face of a cylinder. The height of the cylinder is 38.00 cm and its radius is 10.00 cm. Find the total surface area of the solid



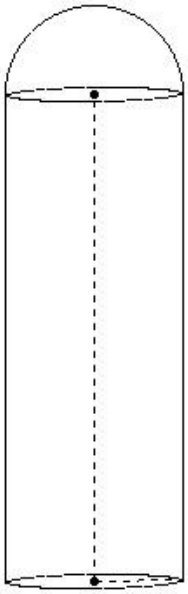
(i) 3601.43 sq.cm (ii) 3181.43 sq.cm (iii) 3071.43 sq.cm (iv) 3351.43 sq.cm (v) 3331.43 sq.cm

4. A hemispherical depression is cut out from both ends of a cylinder. The height of the cylinder is 37.00 cm and its radius is 8.50 cm. Find the total surface area of the solid



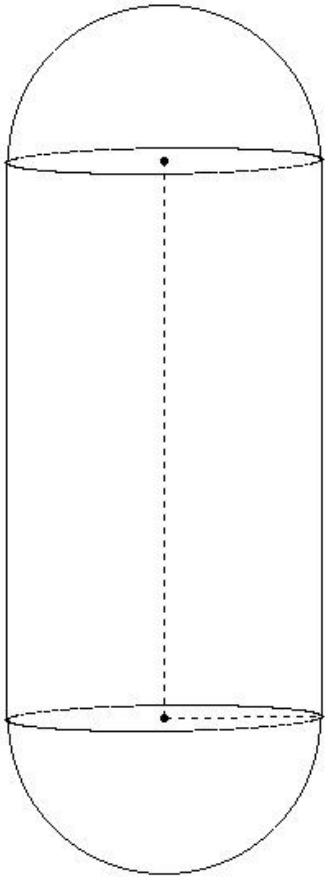
(i) 3125.14 sq.cm (ii) 2905.14 sq.cm (iii) 2885.14 sq.cm (iv) 2765.14 sq.cm (v) 2745.14 sq.cm

5. A solid consists of a cylinder with one hemispherical end with length 28.00 cm and diameter 10.00 cm. Find the total surface area of the solid



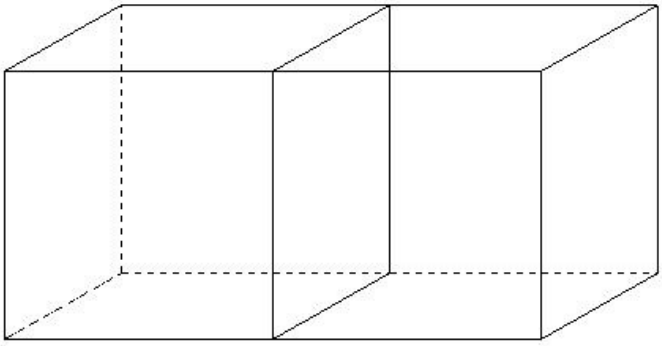
(i) 1295.71 sq.cm (ii) 1055.71 sq.cm (iii) 1145.71 sq.cm (iv) 1115.71 sq.cm (v) 995.71 sq.cm

6. A solid consists of a cylinder with two hemispherical ends with length 34.00 cm and diameter 19.00 cm. Find the total surface area of the solid



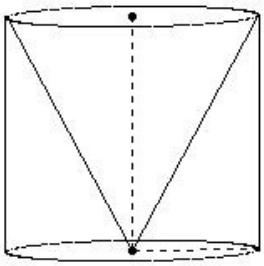
(i) 3164.86 sq.cm (ii) 3334.86 sq.cm (iii) 2984.86 sq.cm (iv) 3114.86 sq.cm (v) 3324.86 sq.cm

7. Two cubes each of volume 4913.00 cu.cm are joined end to end . Find the surface area of the resulting cuboid.



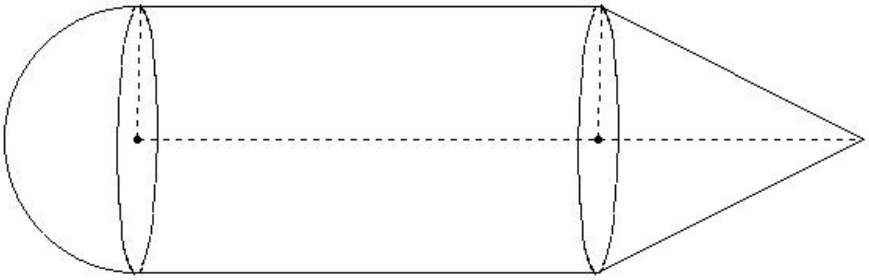
(i) 2890.00 sq.cm (ii) 2950.00 sq.cm (iii) 2660.00 sq.cm (iv) 2730.00 sq.cm (v) 3010.00 sq.cm

8. From a circular cylinder of diameter 15.00 cm and height 14.00 cm, a conical cavity of the same base radius and of the same height is hollowed out. Find the total surface area of the remaining solid.



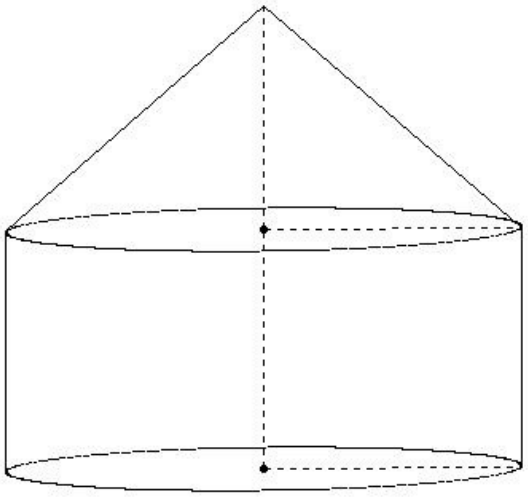
(i) 1091.10 sq.cm (ii) 1431.10 sq.cm (iii) 1211.10 sq.cm (iv) 1241.10 sq.cm (v) 1081.10 sq.cm

9. A solid consists of a right circular cylinder with a hemisphere on one end and a cone on the other . The radius and height of the cylindrical part are 8.50 cm and 29.50 cm respectively. The radii of the hemispherical and conical parts are the same as that of the cylindrical part. Calculate the total surface area of the solid, if the height of the conical part is 17.00 cm



(i) 2658.12 sq.cm (ii) 2388.12 sq.cm (iii) 2318.12 sq.cm (iv) 2538.12 sq.cm (v) 2568.12 sq.cm

10. A tent is in the form of a cylinder surmounted by a cone., The height of the tent above the ground is 29 m and the height of the cylindrical part is 15.00 m. If the diameter of the base is 32.00 m, find the quantity of canvas required to make the tent. Allow 7% extra for folds and for stitching.



(i) 2908.08 sq.m (ii) 2498.08 sq.m (iii) 2758.08 sq.m (iv) 2778.08 sq.m (v) 2618.08 sq.m

Assignment Key

1) (iii)	2) (v)	3) (v)	4) (iii)	5) (iv)	6) (i)
7) (i)	8) (iii)	9) (iv)	10) (iii)		