EduSahara™ Learning Center Assignment

Grade : Class X, SSC
Chapter : Mensuration
Name : Surface Area of a Combination of Solids

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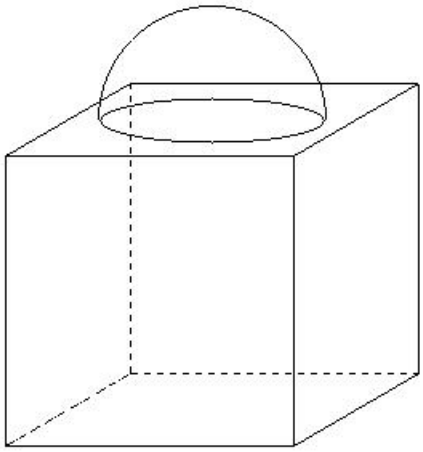
1. If two solids, a cube and a hemisphere are combined such that the base of the block is a cube with edge 18.00 cm and the hemisphere fixed on the top has a diameter of 14.00 cm, find the total surface area of the block.



(i) 2038.00 sq.cm (ii) 2348.00 sq.cm (iii) 1968.00 sq.cm

(iv) 2098.00 sq.cm (v) 2218.00 sq.cm

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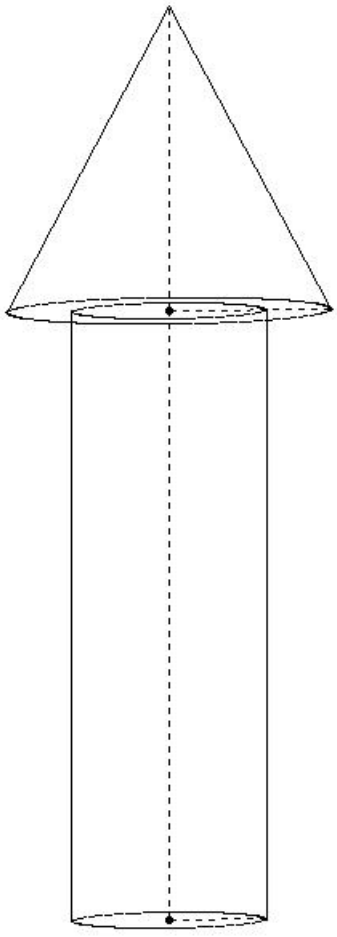
2. A wooden toy rocket is in the shape of a cone mounted on a cylinder. The height of the conical part is 19.00 cm , while the height of the cylindrical part is 38.00 cm. The base of the conical portion has a diameter of 20.00 cm while the base diameter of the cylindrical portion is 12.00 cm. If the conical portion is painted with black and cylindrical portion with orange, find the area of the rocket painted with each of these colors



(i) black area = 873.91 sq.cm , orange area = 1544.29 sq.cm

(ii) black area = 877.91 sq.cm , orange area = 1548.29 sq.cm

(iii) black area = 874.91 sq.cm , orange area = 1545.29 sq.cm

(iv) black area = 876.91 sq.cm , orange area = 1547.29 sq.cm

(v) black area = 875.91 sq.cm , orange area = 1546.29 sq.cm

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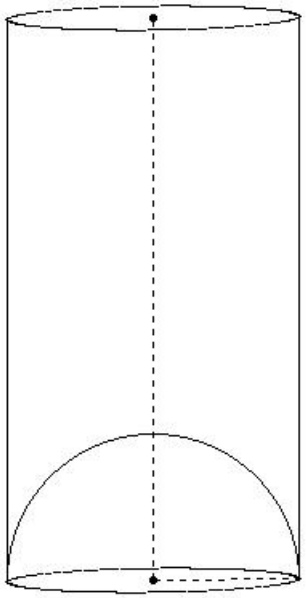
3. A hemispherical depression is cut out from one face of a cylinder. The height of the cylinder is 35.00 cm and its radius is 9.00 cm. Find the total surface area of the solid



(i) 2763.71 sq.cm (ii) 2883.71 sq.cm (iii) 2743.71 sq.cm

(iv) 2683.71 sq.cm (v) 2493.71 sq.cm

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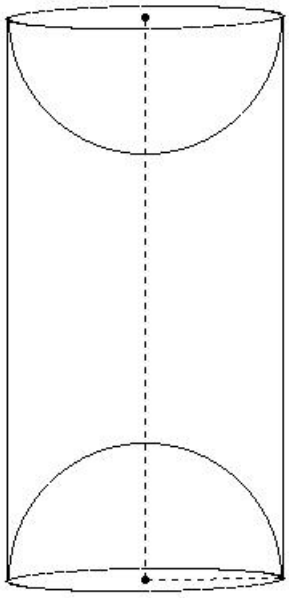
4. A hemispherical depression is cut out from both ends of a cylinder. The height of the cylinder is 35.00 cm and its radius is 8.50 cm. Find the total surface area of the solid



(i) 2828.29 sq.cm (ii) 2938.29 sq.cm (iii) 2608.29 sq.cm

(iv) 2548.29 sq.cm (v) 2778.29 sq.cm

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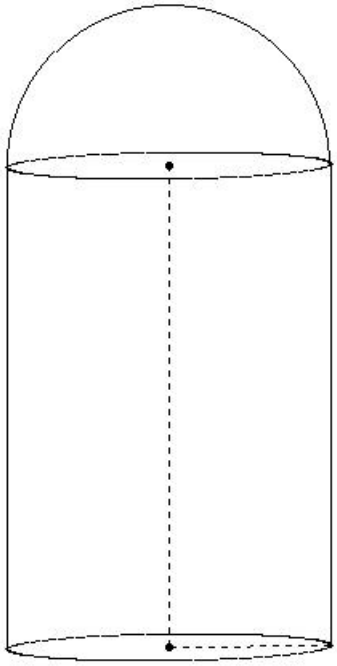
5. A solid consists of a cylinder with one hemispherical end with length 30.00 cm and diameter 20.00 cm. Find the

total surface area of the solid



(i) 2558.57 sq.cm (ii) 2958.57 sq.cm (iii) 2688.57 sq.cm

(iv) 2948.57 sq.cm (v) 2828.57 sq.cm

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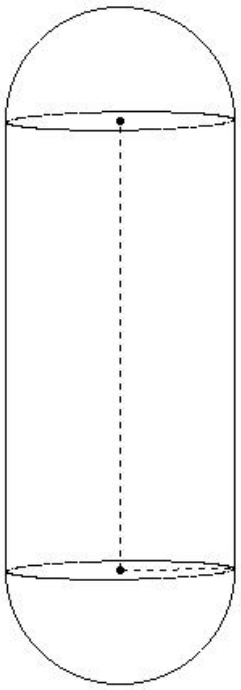
6. A solid consists of a cylinder with two hemispherical ends with length 28.00 cm and diameter 14.00 cm. Find the total surface area of the solid



(i) 1998.00 sq.cm (ii) 1808.00 sq.cm (iii) 1568.00 sq.cm

(iv) 1848.00 sq.cm (v) 2018.00 sq.cm

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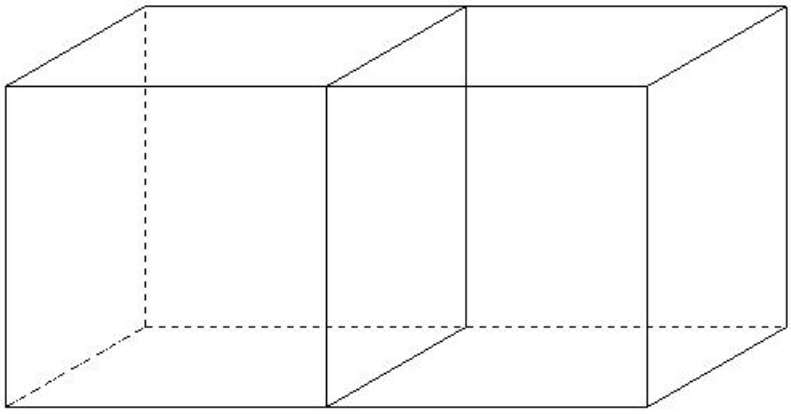
7. Two cubes each of volume 8000.00 cu.cm are joined end to end . Find the surface area of the resulting cuboid.



(i) 4140.00 sq.cm (ii) 4270.00 sq.cm (iii) 4000.00 sq.cm

(iv) 3780.00 sq.cm (v) 3840.00 sq.cm

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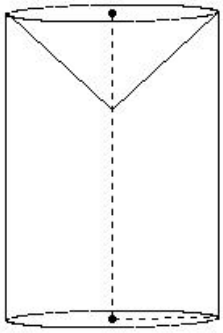
8. From a solid cylinder of height 19.00 cm and base radius 6.50 cm, a conical cavity of height 6.00 cm and base radius 6.50 cm is drilled out. Find the total surface area of the resulting solid



(i) 849.86 sq.cm (ii) 1169.86 sq.cm (iii) 1019.86 sq.cm

(iv) 1089.86 sq.cm (v) 1359.86 sq.cm

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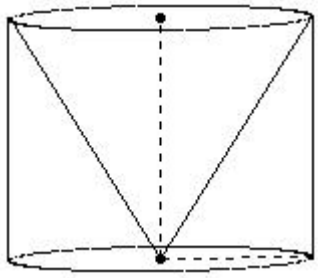
9. From a circular cylinder of diameter 15.00 cm and height 12.00 cm, a conical cavity of the same base radius and of the same height is hollowed out. Find the total surface area of the remaining solid.



(i) 1356.04 sq.cm (ii) 906.04 sq.cm (iii) 1226.04 sq.cm

(iv) 996.04 sq.cm (v) 1076.04 sq.cm

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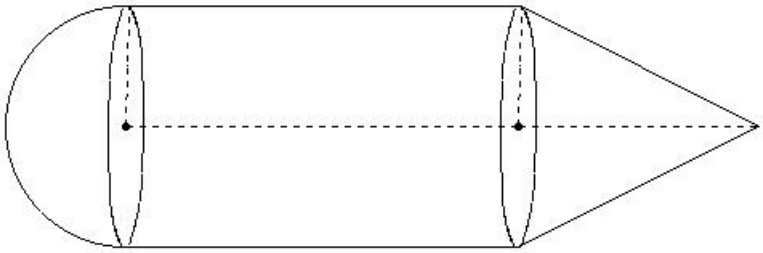
10. A solid consists of a right circular cylinder with a hemisphere on one end and a cone on the other . The radius and height of the cylindrical part are 7.50 cm and 24.50 cm respectively. The radii of the hemispherical and conical parts are the same as that of the cylindrical part. Calculate the total surface area of the solid, if the height of the conical part is 15.00 cm



(i) 1663.86 sq.cm (ii) 1933.86 sq.cm (iii) 1863.86 sq.cm

(iv) 1903.86 sq.cm (v) 2073.86 sq.cm

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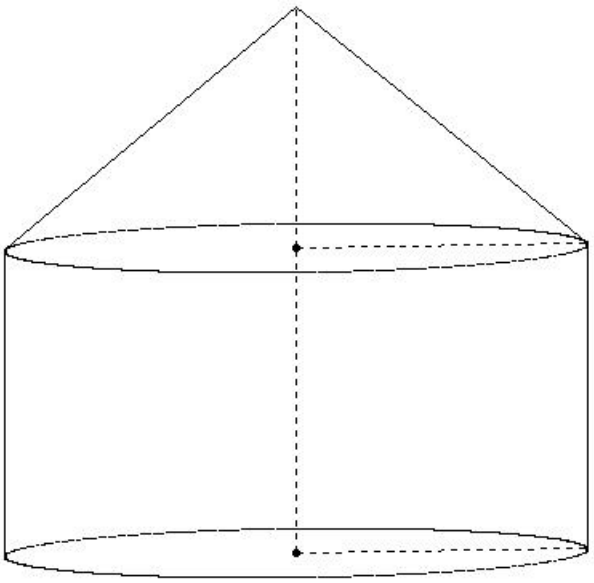
11. A tent is in the form of a cylinder surmounted by a cone., The height of the tent above the ground is 34 mt and the height of the cylindrical part is 19.00 mt. If the diameter of the base is 36.00 mt, find the quantity of canvas required to make the tent. Allow 16% extra for folds and for stitching.



(i) 4171.21 sq.mts (ii) 4161.21 sq.mts (iii) 4031.21 sq.mts

(iv) 3881.21 sq.mts (v) 3751.21 sq.mts

Assignment Key

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