EduSahara™ Learning Center Assignment

Grade : Class X, ICSE
Chapter : Cone and Sphere
Name : Surface Area of a Combination of Solids

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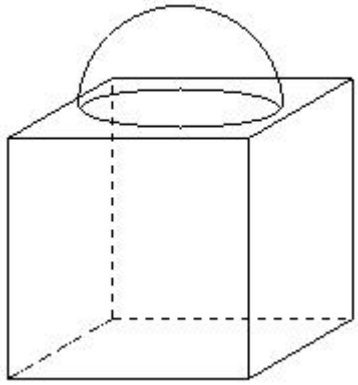
1. If two solids, a cube and a hemisphere are combined such that the base of the block is a cube with edge 12.00 cm and the hemisphere fixed on the top has a diameter of 10.00 cm, find the total surface area of the block.



(i) 942.57 sq.cm (ii) 957.57 sq.cm (iii) 925.57 sq.cm

(iv) 928.57 sq.cm (v) 956.57 sq.cm

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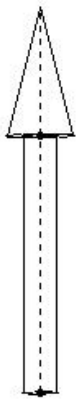
2. A wooden toy rocket is in the shape of a cone mounted on a cylinder. The height of the conical part is 8.00 cm , while the height of the cylindrical part is 16.00 cm. The base of the conical portion has a diameter of 4.00 cm while the base diameter of the cylindrical portion is 2.00 cm. If the conical portion is painted with orange and cylindrical portion with pink, find the area of the rocket painted with each of these colors



(i) orange area = 61.29 sq.cm , pink area = 103.71 sq.cm

(ii) orange area = 59.29 sq.cm , pink area = 101.71 sq.cm

(iii) orange area = 62.29 sq.cm , pink area = 104.71 sq.cm

(iv) orange area = 60.29 sq.cm , pink area = 102.71 sq.cm

(v) orange area = 63.29 sq.cm , pink area = 105.71 sq.cm

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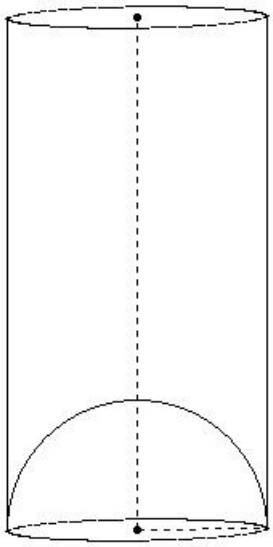
3. A hemispherical depression is cut out from one face of a cylinder. The height of the cylinder is 32.00 cm and its radius is 8.00 cm. Find the total surface area of the solid



(i) 2212.57 sq.cm (ii) 1962.57 sq.cm (iii) 2472.57 sq.cm

(iv) 2352.57 sq.cm (v) 2182.57 sq.cm

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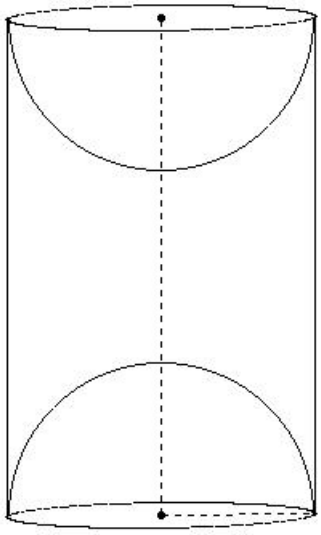
4. A hemispherical depression is cut out from both ends of a cylinder. The height of the cylinder is 31.00 cm and its radius is 9.50 cm. Find the total surface area of the solid



(i) 2805.71 sq.cm (ii) 2985.71 sq.cm (iii) 2915.71 sq.cm

(iv) 3015.71 sq.cm (v) 3135.71 sq.cm

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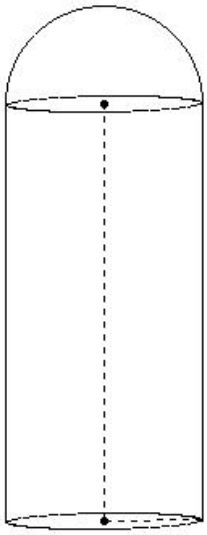
5. A solid consists of a cylinder with one hemispherical end with length 26.00 cm and diameter 12.00 cm. Find the total surface area of the solid



(i) 1100.00 sq.cm (ii) 1570.00 sq.cm (iii) 1320.00 sq.cm

(iv) 1290.00 sq.cm (v) 1340.00 sq.cm

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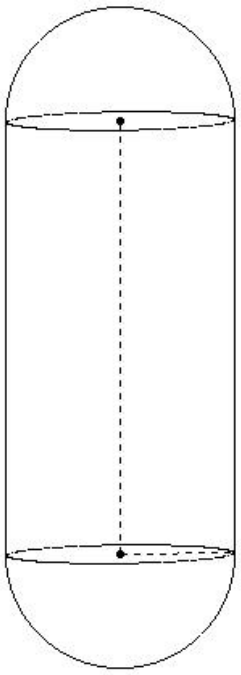
6. A solid consists of a cylinder with two hemispherical ends with length 27.00 cm and diameter 14.00 cm. Find the total surface area of the solid



(i) 1544.00 sq.cm (ii) 1804.00 sq.cm (iii) 1754.00 sq.cm

(iv) 2074.00 sq.cm (v) 1824.00 sq.cm

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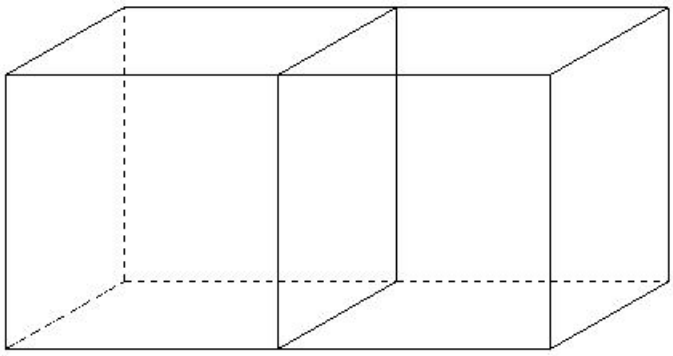
7. Two cubes each of volume 4913.00 cu.cm are joined end to end . Find the surface area of the resulting cuboid.



(i) (ii) (iii)

2960.00 sq.cm 2670.00 sq.cm 2740.00 sq.cm

(iv) 3160.00 sq.cm (v) 2890.00 sq.cm

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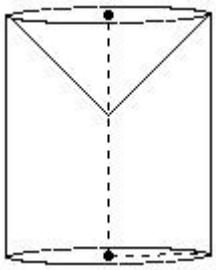
8. From a solid cylinder of height 12.00 cm and base radius 5.00 cm, a conical cavity of height 5.00 cm and base radius 5.00 cm is drilled out. Find the total surface area of the resulting solid



(i) 566.81 sq.cm (ii) 551.81 sq.cm (iii) 579.81 sq.cm

(iv) 582.81 sq.cm (v) 564.81 sq.cm

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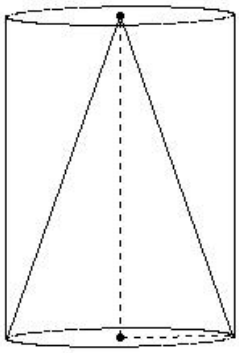
9. From a circular cylinder of diameter 14.00 cm and height 20.00 cm, a conical cavity of the same base radius and of the same height is hollowed out. Find the total surface area of the remaining solid.



(i) 1650.18 sq.cm (ii) 1370.18 sq.cm (iii) 1280.18 sq.cm

(iv) 1500.18 sq.cm (v) 1630.18 sq.cm

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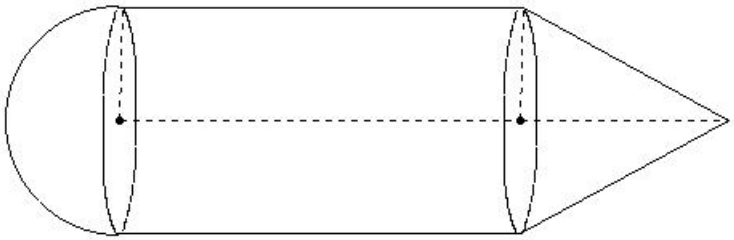
10. A solid consists of a right circular cylinder with a hemisphere on one end and a cone on the other . The radius and height of the cylindrical part are 7.00 cm and 25.00 cm respectively. The radii of the hemispherical and conical parts are the same as that of the cylindrical part. Calculate the total surface area of the solid, if the height of the conical part is 13.00 cm



(i) 1802.72 sq.cm (ii) 1732.72 sq.cm (iii) 1992.72 sq.cm

(iv) 1602.72 sq.cm (v) 1552.72 sq.cm

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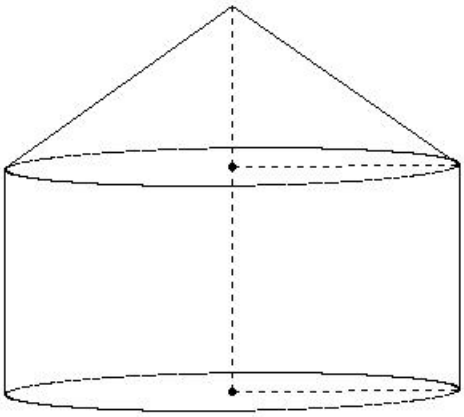
11. A tent is in the form of a cylinder surmounted by a cone., The height of the tent above the ground is 24 mt and the height of the cylindrical part is 14.00 mt. If the diameter of the base is 28.00 mt, find the quantity of canvas required to make the tent. Allow 8% extra for folds and for stitching.



(i) 1977.90 sq.mts (ii) 2297.90 sq.mts (iii) 2147.90 sq.mts

(iv) 2217.90 sq.mts (v) 1907.90 sq.mts

Assignment Key

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