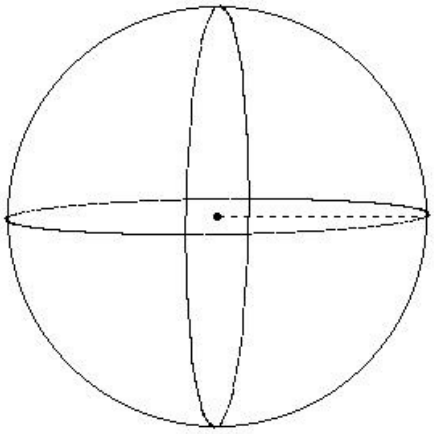
EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : Cone and Sphere

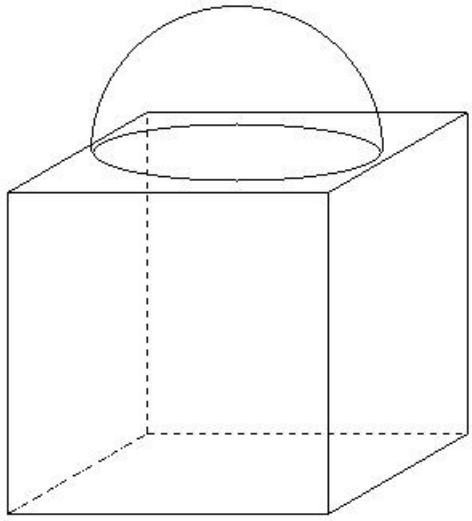
Grade : ICSE Grade X

1. If the radius of a sphere is 13.00 cm, its volume is



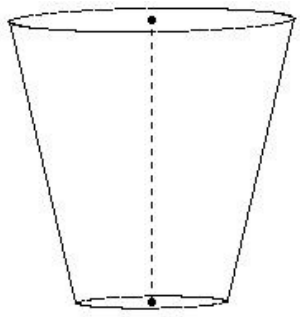
(i) 8926.48 cu.cm (ii) 9206.48 cu.cm (iii) 9266.48 cu.cm (iv) 9356.48 cu.cm (v) 9136.48 cu.cm

2. If two solids, a cube and a hemisphere are combined such that the base of the block is a cube with edge 20.00 cm and the hemisphere fixed on the top has a diameter of 18.00 cm, find the total surface area of the block.



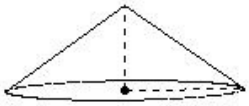
(i) 2794.57 sq.cm (ii) 2654.57 sq.cm (iii) 2594.57 sq.cm (iv) 2374.57 sq.cm (v) 2784.57 sq.cm

3. The radii of the ends of a frustum of a right circular cone 17.00 cm high are 8.50 cm and 4.50 cm. Its slant height is



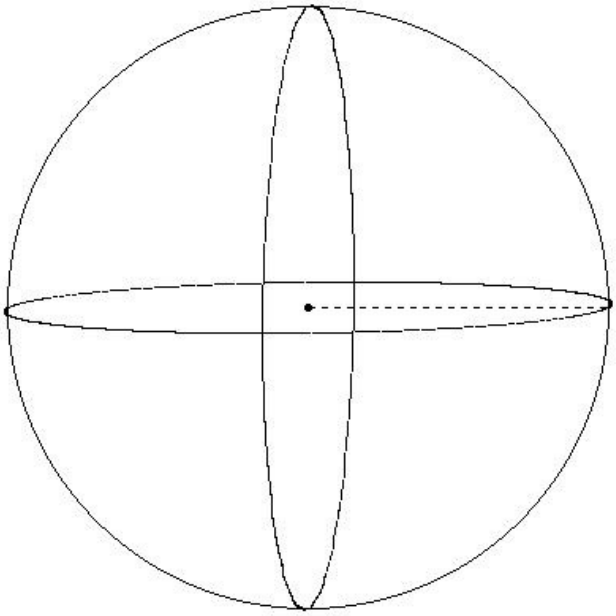
(i) 17.46 cm (ii) 20.46 cm (iii) 14.46 cm (iv) 22.46 cm (v) 12.46 cm

4. If the vertical height of a cone is 5.00 cm and volume is 256.67 cu.cm, its slant height is



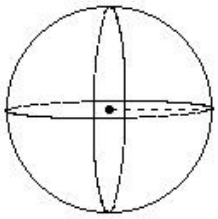
(i) 10.60 cm (ii) 7.60 cm (iii) 9.60 cm (iv) 8.60 cm (v) 6.60 cm

5. If the T.S.A of a sphere is 4538.29 sq.cm, its radius is



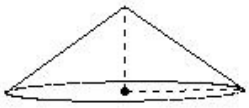
(i) 19.00 cm (ii) 16.00 cm (iii) 14.00 cm (iv) 24.00 cm (v) 22.00 cm

6. If the volume of a sphere is 905.14 cu.cm, its L.S.A is



(i) 452.57 sq.cm (ii) 468.57 sq.cm (iii) 450.57 sq.cm (iv) 427.57 sq.cm (v) 464.57 sq.cm

7. If the base radius of a cone is 7.00 cm and L.S.A is 189.20 sq.cm, its T.S.A is

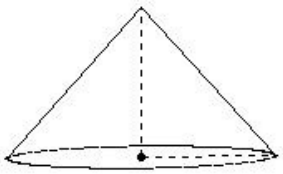


(i) 325.20 sq.cm (ii) 343.20 sq.cm (iii) 316.20 sq.cm (iv) 351.20 sq.cm (v) 357.20 sq.cm

8. A hollow sphere of internal and external diameters 18.00 cm and 26.00 cm respectively is melted into a cone of base diameter 12.00 cm. Find the height of the cone

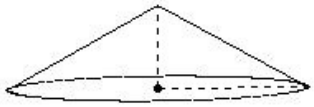
(i) 187.11 cm (ii) 166.11 cm (iii) 150.11 cm (iv) 137.11 cm (v) 163.11 cm

9. If the slant height of a cone is 12.04 cm and vertical height is 9.00 cm, its volume is



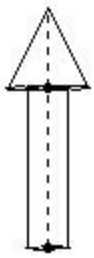
(i) 588.43 cu.cm (ii) 603.43 cu.cm (iii) 590.43 cu.cm (iv) 621.43 cu.cm (v) 619.43 cu.cm

10. If the base radius of a cone is 9.00 cm and L.S.A is 291.34 sq.cm, its volume is



(i) 429.29 cu.cm (ii) 424.29 cu.cm (iii) 407.29 cu.cm (iv) 400.29 cu.cm (v) 441.29 cu.cm

11. A wooden toy rocket is in the shape of a cone mounted on a cylinder. The height of the conical part is 4.00 cm , while the height of the cylindrical part is 8.00 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 black and cylindrical portion with red, find the area of the rocket painted with each of these colors

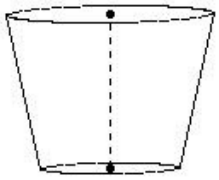


(i) $\text{black area} = 38.53 \text{ sq.cm}, \text{red area} = 54.43 \text{ sq.cm}$ (ii) $\text{black area} = 36.53 \text{ sq.cm}, \text{red area} = 52.43 \text{ sq.cm}$

(iii) $\text{black area} = 39.53 \text{ sq.cm}, \text{red area} = 55.43 \text{ sq.cm}$ (iv) $\text{black area} = 37.53 \text{ sq.cm}, \text{red area} = 53.43 \text{ sq.cm}$

(v) $\text{black area} = 35.53 \text{ sq.cm}, \text{red area} = 51.43 \text{ sq.cm}$

12. The radii of the ends of a frustum of a right circular cone 9.00 cm high are 6.00 cm and 4.00 cm. Its volume is

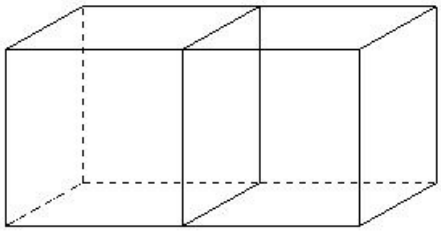


(i) 716.57 cu.cm (ii) 733.57 cu.cm (iii) 708.57 cu.cm (iv) 704.57 cu.cm (v) 731.57 cu.cm

13. A cylindrical vessel of base radius 22.00 cm contains water . A solid sphere of radius 19.00 cm is immersed completely in the water. Find the rise in the water level in the vessel

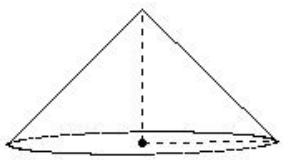
(i) 15.90 cm (ii) 13.90 cm (iii) 18.90 cm (iv) 23.90 cm (v) 21.90 cm

14. Two cubes each of volume 1331.00 cu.cm are joined end to end . Find the surface area of the resulting cuboid.



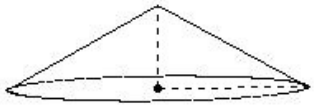
(i) 1170.00 sq.cm (ii) 1270.00 sq.cm (iii) 1460.00 sq.cm (iv) 1030.00 sq.cm (v) 1210.00 sq.cm

15. If the base radius of a cone is 8.00 cm and slant height is 11.31 cm, its T.S.A is



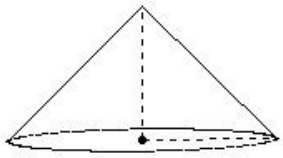
(i) 483.51 sq.cm (ii) 462.51 sq.cm (iii) 485.51 sq.cm (iv) 499.51 sq.cm (v) 497.51 sq.cm

16. If the base radius of a cone is 9.00 cm and volume is 424.29 cu.cm, its L.S.A. is



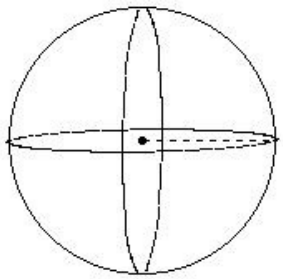
(i) 278.34 sq.cm (ii) 291.34 sq.cm (iii) 303.34 sq.cm (iv) 295.34 sq.cm (v) 283.34 sq.cm

17. If the base radius of a cone is 8.00 cm and volume is 536.38 cu.cm, its base area is



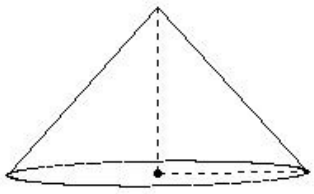
(i) 201.14 sq.cm (ii) 203.14 sq.cm (iii) 217.14 sq.cm (iv) 174.14 sq.cm (v) 197.14 sq.cm

18. If the T.S.A of a sphere is 804.57 sq.cm, its volume is



(i) 2095.52 cu.cm (ii) 2365.52 cu.cm (iii) 2205.52 cu.cm (iv) 2145.52 cu.cm (v) 1915.52 cu.cm

19. If the vertical height of a cone is 10.00 cm and volume is 848.57 cu.cm, its base area is

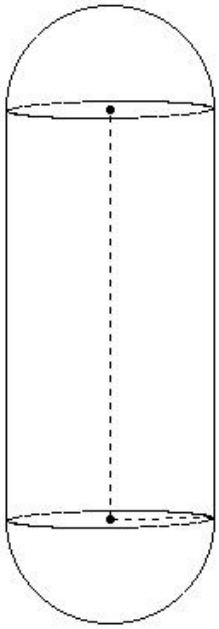


(i) 239.57 sq.cm (ii) 254.57 sq.cm (iii) 236.57 sq.cm (iv) 281.57 sq.cm (v) 258.57 sq.cm

20. An ice cream container has the shape of a right circular cylinder having inner diameter 30.00 cm and height 34.00 cm . The ice cream is filled into cones of diameter 18.00 cm and height 10.00 cm , having a hemispherical shape on the top. Find the number of such complete cones which can be filled with ice cream

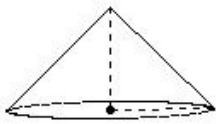
(i) 10 (ii) 15 (iii) 13 (iv) 5 (v) 7

21. A solid consists of a cylinder with two hemispherical ends with length 24.00 cm and diameter 12.00 cm. Find the total surface area of the solid



(i) 1517.71 sq.cm (ii) 1217.71 sq.cm (iii) 1527.71 sq.cm (iv) 1357.71 sq.cm (v) 1207.71 sq.cm

22. If the base radius of a cone is 6.00 cm and L.S.A is 160.10 sq.cm, its base area is



(i) 117.14 sq.cm (ii) 107.14 sq.cm (iii) 126.14 sq.cm (iv) 91.14 sq.cm (v) 113.14 sq.cm

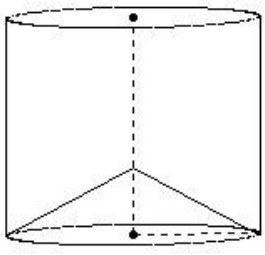
23. A hollow metallic cylindrical tube has an internal radius of 11.50 cm and height 16.00 cm. The thickness of the metal is 3 cm .The tube is melted to cast into a right circular cone of height 11.00 cm. Find the radius of the cone.

(i) 21.45 cm (ii) 15.45 cm (iii) 23.45 cm (iv) 18.45 cm (v) 13.45 cm

24. A copper sphere having a radius of 5.00 cm is melted and drawn into a cylindrical wire of radius 0.10 cm. Calculate the length of the wire.

(i) 178.67 m (ii) 160.67 m (iii) 166.67 m (iv) 192.67 m (v) 153.67 m

25. From a solid cylinder of height 13.00 cm and base radius 7.50 cm, a conical cavity of height 4.00 cm and base radius 7.50 cm is drilled out. Find the volume of the resulting solid



(i) 2212.50 cu.cm (ii) 2062.50 cu.cm (iii) 1902.50 cu.cm (iv) 2232.50 cu.cm (v) 1822.50 cu.cm

Assignment Key

1) (ii)	2) (ii)	3) (i)	4) (iv)	5) (i)	6) (i)
7) (ii)	8) (v)	9) (ii)	10) (ii)	11) (iv)	12) (i)
13) (iii)	14) (v)	15) (iii)	16) (ii)	17) (i)	18) (iv)
19) (ii)	20) (i)	21) (iv)	22) (v)	23) (iv)	24) (iii)
25) (ii)					