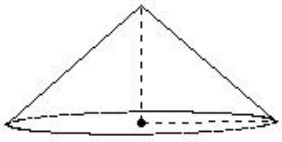
EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : Cone and Sphere

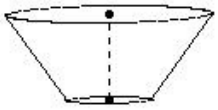
Grade : ICSE Grade X

1. If the slant height of a cone is 10.63 cm and vertical height is 7.00 cm, its volume is



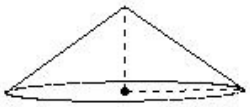
(i) 451.33 cu.cm (ii) 469.33 cu.cm (iii) 482.33 cu.cm (iv) 467.33 cu.cm (v) 494.33 cu.cm

2. The radii of the ends of a frustum of a right circular cone 5.00 cm high are 6.00 cm and 2.50 cm. Its total surface area is



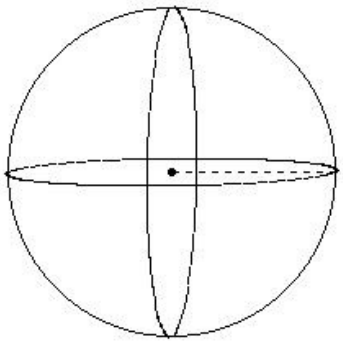
(i) 278.83 sq.cm (ii) 295.83 sq.cm (iii) 319.83 sq.cm (iv) 300.83 sq.cm (v) 293.83 sq.cm

3. If the vertical height of a cone is 5.00 cm and volume is 256.67 cu.cm, its base radius is



(i) 7.00 cm (ii) 9.00 cm (iii) 5.00 cm (iv) 8.00 cm (v) 6.00 cm

4. If the L.S.A of a sphere is 1257.14 sq.cm, its volume is



(i) 4140.48 cu.cm (ii) 4060.48 cu.cm (iii) 4430.48 cu.cm (iv) 4190.48 cu.cm (v) 4260.48 cu.cm

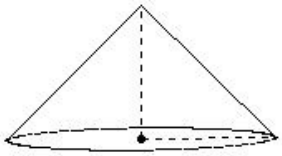
5. A hollow metallic cylindrical tube has an internal radius of 11.50 cm and height 30.00 cm. The thickness of the metal is 2 cm .The tube is melted to cast into a right circular cone of height 15.00 cm. Find the radius of the cone.

(i) 20.32 cm (ii) 14.32 cm (iii) 22.32 cm (iv) 12.32 cm (v) 17.32 cm

6. A hollow sphere of internal and external diameters 28.00 cm and 36.00 cm respectively is melted into a cone of base diameter 20.00 cm. Find the height of the cone

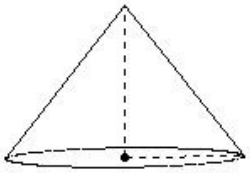
(i) 138.52 cm (ii) 111.52 cm (iii) 123.52 cm (iv) 140.52 cm

7. If the base radius of a cone is 8.00 cm and vertical height is 8.00 cm, its L.S.A. is



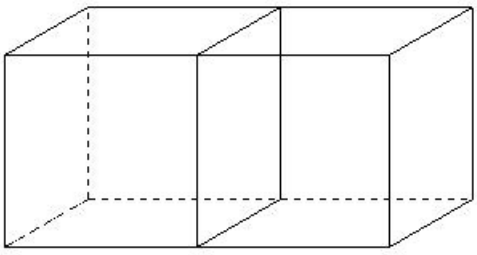
(i) 284.37 sq.cm (ii) 306.37 sq.cm (iii) 289.37 sq.cm (iv) 270.37 sq.cm (v) 278.37 sq.cm

8. If the slant height of a cone is 11.40 cm and T.S.A is 404.80 sq.cm, its base radius is



(i) 6.00 cm (ii) 8.00 cm (iii) 7.00 cm (iv) 5.00 cm (v) 9.00 cm

9. Two cubes each of volume 1728.00 cu.cm are joined end to end . Find the surface area of the resulting cuboid.

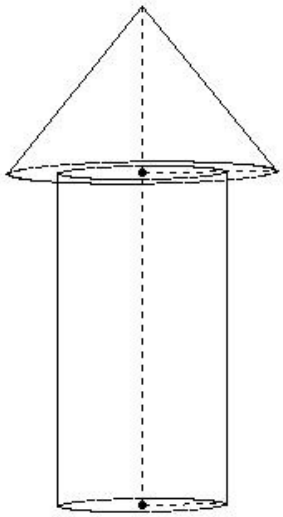


(i) 1590.00 sq.cm (ii) 1160.00 sq.cm (iii) 1320.00 sq.cm (iv) 1440.00 sq.cm (v) 1670.00 sq.cm

10. The surface area of a solid metallic sphere is 6650.29 sq.cm. It is melted and recasted into solid right circular cones of radius 16.10 cm and height 13.80 cm . Find the number of complete cones that can be made

(i) 10 (ii) 18 (iii) 16 (iv) 8 (v) 13

11. A wooden toy rocket is in the shape of a cone mounted on a cylinder. The height of the conical part is 10.00 cm , while the height of the cylindrical part is 20.00 cm. The base of the conical portion has a diameter of 16.00 cm while the base diameter of the cylindrical portion is 10.00 cm. If the conical portion is painted with white and cylindrical portion with red, find the area of the rocket painted with each of these colors



(i) white area = 442.65 sq.cm, red area = 705.14 sq.cm (ii) white area = 444.65 sq.cm, red area = 707.14 sq.cm

(iii) white area = 443.65 sq.cm, red area = 706.14 sq.cm

(iv) white area = 445.65 sq.cm, red area = 708.14 sq.cm

(v) white area = 446.65 sq.cm, red area = 709.14 sq.cm

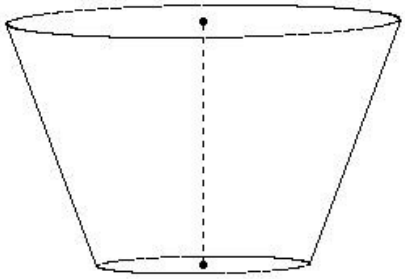
12. A well of diameter 13.00 m is dug to a depth of 13.00 m . The soil taken out of it has been spread evenly all around it in the shape of a circular ring of width 10m to form an embankment. Find the height of the embankment.

(i) 1.39 m (ii) 0.39 m (iii) 2.39 m (iv) 4.39 m (v) 3.39 m

13. A farmer connects a pipe of internal diameter 48 cm from a canal into a cylindrical tank in his field, which is 12 m in diameter and 4 m deep. If water flows through the pipe at the rate of 5 kmph , in how much time will the tank be filled ?

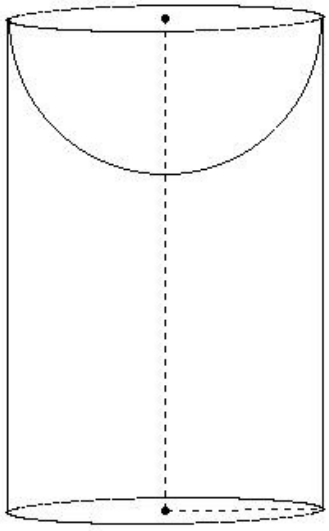
(i) 27.00 min (ii) 35.00 min (iii) 25.00 min (iv) 33.00 min (v) 30.00 min

14. The radii of the ends of a frustum of a right circular cone 15.00 cm high are 12.00 cm and 6.50 cm. Its slant height is



(i) 18.98 cm (ii) 10.98 cm (iii) 15.98 cm (iv) 20.98 cm (v) 12.98 cm

15. A hemispherical depression is cut out from one face of a cylinder. The height of the cylinder is 30.00 cm and its radius is 9.50 cm. Find the total surface area of the solid

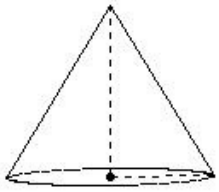


(i) 2382.36 sq.cm (ii) 2642.36 sq.cm (iii) 2782.36 sq.cm (iv) 2612.36 sq.cm (v) 2892.36 sq.cm

16. Marbles of diameter 2.00 cm are dropped into a cylindrical beaker containing some water. When they are fully submerged, the water level rises by 4 cm. If the diameter of the beaker is 36.00 cm, find the number of marbles that are dropped in it

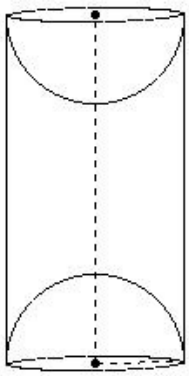
(i) 985 (ii) 972 (iii) 946 (iv) 990 (v) 954

17. If the slant height of a cone is 11.66 cm and T.S.A is 333.02 sq.cm, its volume is



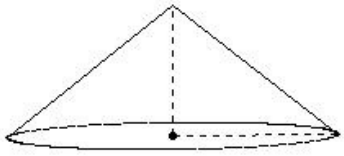
(i) 370.14 cu.cm (ii) 382.14 cu.cm (iii) 353.14 cu.cm (iv) 377.14 cu.cm (v) 395.14 cu.cm

18. A hemispherical depression is cut out from both ends of a cylinder. The height of the cylinder is 20.00 cm and its radius is 5.00 cm. Find the total surface area of the solid



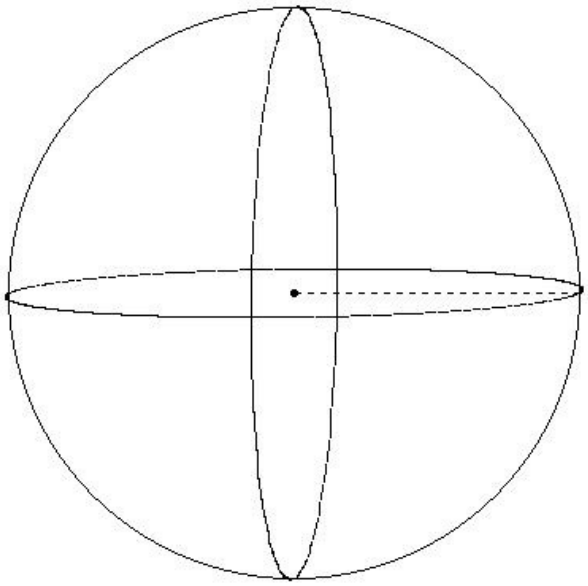
(i) 938.86 sq.cm (ii) 917.86 sq.cm (iii) 955.86 sq.cm (iv) 942.86 sq.cm (v) 944.86 sq.cm

19. If the slant height of a cone is 12.81 cm and T.S.A is 716.89 sq.cm, its L.S.A. is



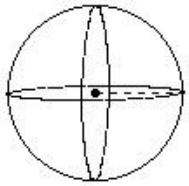
(i) 402.60 sq.cm (ii) 386.60 sq.cm (iii) 408.60 sq.cm (iv) 425.60 sq.cm (v) 380.60 sq.cm

20. If the L.S.A of a sphere is 4073.14 sq.cm, its radius is



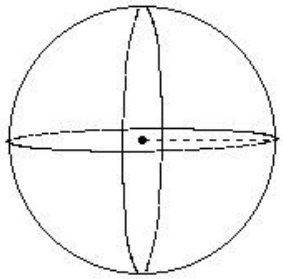
(i) 21.00 cm (ii) 13.00 cm (iii) 15.00 cm (iv) 23.00 cm (v) 18.00 cm

21. If the volume of a sphere is 523.81 cu.cm, its L.S.A is



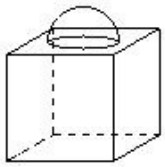
(i) 296.29 sq.cm (ii) 322.29 sq.cm (iii) 339.29 sq.cm (iv) 287.29 sq.cm (v) 314.29 sq.cm

22. If the volume of a sphere is 2145.52 cu.cm, its radius is



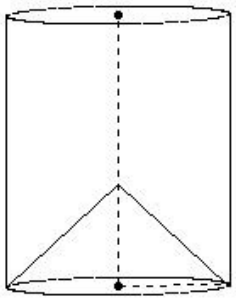
(i) 6.00 cm (ii) 10.00 cm (iii) 7.00 cm (iv) 9.00 cm (v) 8.00 cm

23. If two solids, a cube and a hemisphere are combined such that the base of the block is a cube with edge 6.00 cm and the hemisphere fixed on the top has a diameter of 4.00 cm, find the total surface area of the block.



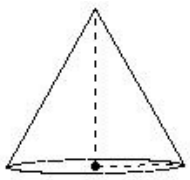
(i) 211.57 sq.cm (ii) 244.57 sq.cm (iii) 251.57 sq.cm (iv) 228.57 sq.cm (v) 203.57 sq.cm

24. From a solid cylinder of height 16.00 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) 950.29 sq.cm (ii) 982.29 sq.cm (iii) 963.29 sq.cm (iv) 981.29 sq.cm (v) 967.29 sq.cm

25. If the base radius of a cone is 5.00 cm and L.S.A is 161.86 sq.cm, its volume is



(i) 235.71 cu.cm (ii) 263.71 cu.cm (iii) 222.71 cu.cm (iv) 220.71 cu.cm (v) 239.71 cu.cm

Assignment Key

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