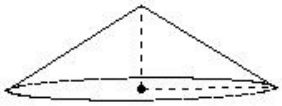
EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : Cone and Sphere

Grade : ICSE Grade X

1. If the slant height of a cone is 9.43 cm and L.S.A is 237.10 sq.cm, its T.S.A is



(i) 453.24 sq.cm (ii) 436.24 sq.cm (iii) 438.24 sq.cm (iv) 415.24 sq.cm (v) 462.24 sq.cm

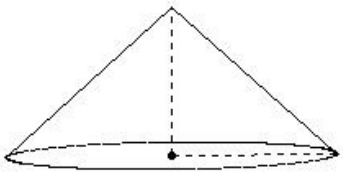
2. A cylindrical vessel of base radius 22.00 cm contains water . A solid sphere of radius 12.00 cm is immersed completely in the water. Find the rise in the water level in the vessel

(i) 2.76 cm (ii) 3.76 cm (iii) 5.76 cm (iv) 4.76 cm (v) 6.76 cm

3. Metallic spheres of radii 8.00 cm, 3.00 cm, 15.00 cm are melted to form a single solid sphere. Find the radius of the resulting sphere.

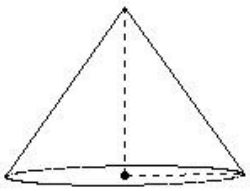
(i) $\sqrt[3]{3914}$ cm (ii) $\sqrt[3]{3917}$ cm (iii) $\sqrt[3]{3912}$ cm (iv) $\sqrt[5]{3914}$ cm (v) 3914 cm

4. If the slant height of a cone is 13.45 cm and T.S.A is 737.00 sq.cm, its base area is



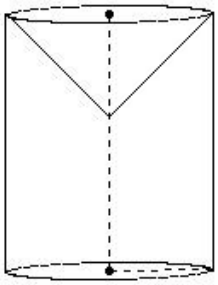
(i) 314.29 sq.cm (ii) 331.29 sq.cm (iii) 317.29 sq.cm (iv) 312.29 sq.cm (v) 292.29 sq.cm

5. If the base radius of a cone is 7.00 cm and L.S.A is 268.62 sq.cm, its T.S.A is



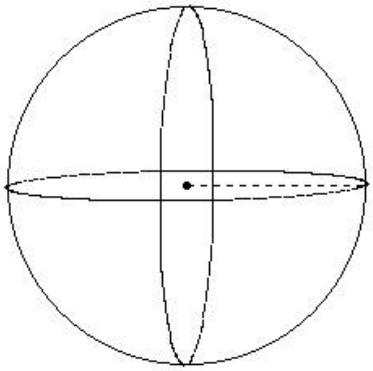
(i) 396.62 sq.cm (ii) 450.62 sq.cm (iii) 428.62 sq.cm (iv) 415.62 sq.cm (v) 422.62 sq.cm

6. From a solid cylinder of height 15.00 cm and base radius 6.00 cm, a conical cavity of height 6.00 cm and base radius 6.00 cm is drilled out. Find the total surface area of the resulting solid



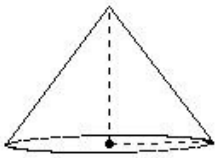
(i) 855.95 sq.cm (ii) 838.95 sq.cm (iii) 852.95 sq.cm (iv) 821.95 sq.cm (v) 810.95 sq.cm

7. If the T.S.A of a sphere is 1521.14 sq.cm, its volume is



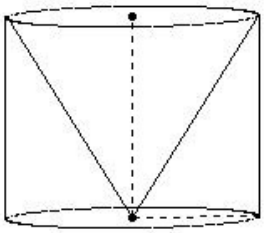
(i) 5437.52 cu.cm (ii) 5517.52 cu.cm (iii) 5797.52 cu.cm (iv) 5607.52 cu.cm (v) 5577.52 cu.cm

8. If the slant height of a cone is 10.00 cm and L.S.A is 188.57 sq.cm, its vertical height is



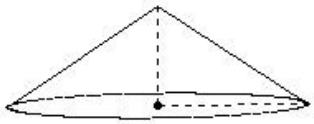
(i) 10.00 cm (ii) 7.00 cm (iii) 8.00 cm (iv) 6.00 cm (v) 9.00 cm

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 volume of the remaining solid.



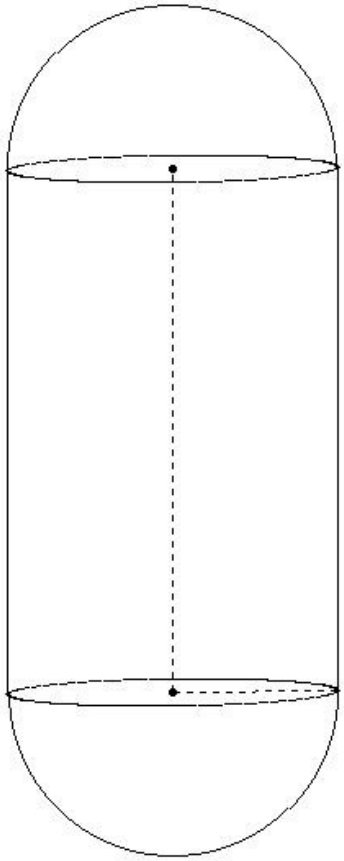
(i) 1184.29 cu.cm (ii) 1464.29 cu.cm (iii) 1414.29 cu.cm (iv) 1234.29 cu.cm (v) 1654.29 cu.cm

10. If the vertical height of a cone is 6.00 cm and volume is 509.14 cu.cm, its T.S.A is



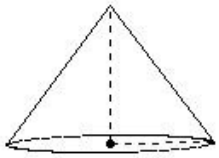
(i) 560.62 sq.cm (ii) 584.62 sq.cm (iii) 543.62 sq.cm (iv) 572.62 sq.cm

11. A solid consists of a cylinder with two hemispherical ends with length 32.00 cm and diameter 20.00 cm. Find the total surface area of the solid



(i) 3118.57 sq.cm (ii) 3148.57 sq.cm (iii) 3268.57 sq.cm (iv) 3298.57 sq.cm (v) 3428.57 sq.cm

12. If the base radius of a cone is 6.00 cm and L.S.A is 188.57 sq.cm, its volume is

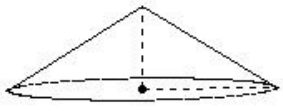


(i) 323.71 cu.cm (ii) 306.71 cu.cm (iii) 301.71 cu.cm (iv) 295.71 cu.cm (v) 274.71 cu.cm

13. A conical vessel of radius 10.00 cm and height 24.00 cm is completely filled with water. A sphere is lowered into the water and its size is such that when it touches the sides, it is just immersed. Find the fraction of the water that overflows

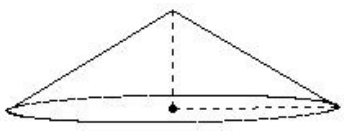
(i) $\frac{40}{81}$ (ii) $\frac{14}{27}$ (iii) $\frac{38}{81}$ (iv) $\frac{40}{83}$ (v) $\frac{40}{79}$

14. If the slant height of a cone is 9.43 cm and L.S.A is 237.10 sq.cm, its base area is



(i) 197.14 sq.cm (ii) 185.14 sq.cm (iii) 201.14 sq.cm (iv) 218.14 sq.cm (v) 219.14 sq.cm

15. If the slant height of a cone is 11.66 cm and vertical height is 6.00 cm, its T.S.A is

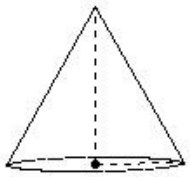


(i) 655.74 sq.cm (ii) 680.74 sq.cm (iii) 697.74 sq.cm (iv) 666.74 sq.cm

16. A well of diameter 17.00 m is dug to a depth of 19.00 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.

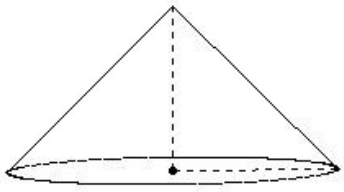
(i) 4.08 m (ii) 6.08 m (iii) 5.08 m (iv) 3.08 m (v) 7.08 m

17. If the base radius of a cone is 5.00 cm and vertical height is 9.00 cm, its slant height is



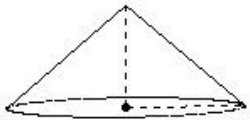
(i) 13.30 cm (ii) 10.30 cm (iii) 15.30 cm (iv) 7.30 cm (v) 5.30 cm

18. If the base radius of a cone is 10.00 cm and vertical height is 10.00 cm, its L.S.A. is



(i) 426.40 sq.cm (ii) 461.40 sq.cm (iii) 428.40 sq.cm (iv) 467.40 sq.cm (v) 444.40 sq.cm

19. If the slant height of a cone is 9.22 cm and vertical height is 6.00 cm, its base radius is

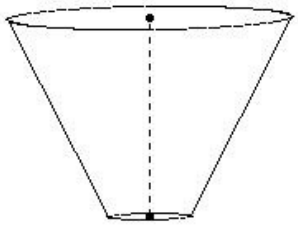


(i) 8.00 cm (ii) 9.00 cm (iii) 6.00 cm (iv) 7.00 cm (v) 5.00 cm

20. A well of diameter 15.00 m is dug to a depth of 14.00 m and the soil from digging is evenly spread out to form a platform of base dimensions 24.00 m×24.00 m . Find the height of the platform

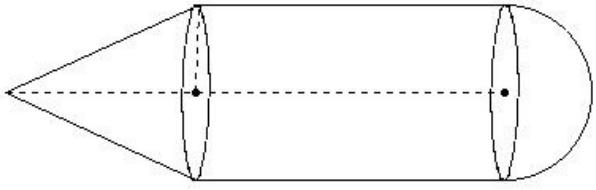
(i) 3.30 m (ii) 5.30 m (iii) 4.30 m (iv) 6.30 m (v) 2.30 m

21. The radii of the ends of a frustum of a right circular cone 12.00 cm high are 8.50 cm and 2.50 cm. Its slant height is



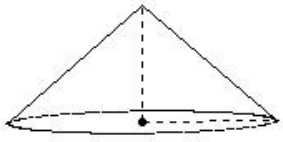
(i) 18.42 cm (ii) 8.42 cm (iii) 16.42 cm (iv) 13.42 cm (v) 10.42 cm

22. 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 5.50 cm and 19.50 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 12.00 cm



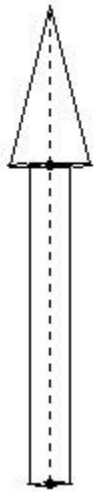
(i) 862.46 sq.cm (ii) 912.46 sq.cm (iii) 1122.46 sq.cm (iv) 1092.46 sq.cm (v) 1352.46 sq.cm

23. If the base radius of a cone is 8.00 cm and vertical height is 7.00 cm, its T.S.A is



(i) 476.41 sq.cm (ii) 453.41 sq.cm (iii) 468.41 sq.cm (iv) 482.41 sq.cm (v) 466.41 sq.cm

24. 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 yellow and cylindrical portion with blue, find the area of the rocket painted with each of these colors



(i) $\text{yellow area} = 62.29 \text{ sq.cm}, \text{blue area} = 104.71 \text{ sq.cm}$

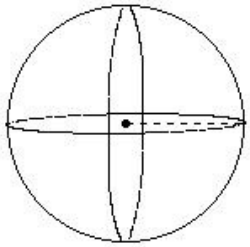
(ii) $\text{yellow area} = 60.29 \text{ sq.cm}, \text{blue area} = 102.71 \text{ sq.cm}$

(iii) $\text{yellow area} = 61.29 \text{ sq.cm}, \text{blue area} = 103.71 \text{ sq.cm}$

(iv) $\text{yellow area} = 59.29 \text{ sq.cm}, \text{blue area} = 101.71 \text{ sq.cm}$

(v) $\text{yellow area} = 63.29 \text{ sq.cm}, \text{blue area} = 105.71 \text{ sq.cm}$

25. If the volume of a sphere is 1437.33 cu.cm, its T.S.A is



(i) 633.00 sq.cm (ii) 631.00 sq.cm (iii) 600.00 sq.cm (iv) 598.00 sq.cm (v) 616.00 sq.cm

Assignment Key

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