



MCQ/ IX/ Volume and surface area

1. If the perimeter of one of the faces of a cube is 40 cm, then its volume is:
(a) 6000 cm^3
(b) 1600 cm^3
(c) 1000 cm^3
(d) 600 cm^3
2. A cuboid having surface areas of 3 adjacent faces as a, b and c has the volume:
(a) $3\sqrt{abc}$
(b) $\sqrt{abc}$
(c) abc
(d) $(abc)^2$
3. The radius of a cylinder is doubled and the height remains the same. The ratio between the volumes of the new cylinder and the original cylinder is
(a) 1 : 2
(b) 3 : 1
(c) 4 : 1
(d) 1 : 8
4. Length of diagonals of a cube of side a cm is
(a) $\sqrt{2}a \text{ cm}$
(b) $\sqrt{3}a \text{ cm}$
(c) $\sqrt{3}a \text{ cm}$
(d) 1 cm
5. Volume of spherical shell is
(a) $\frac{2}{3} \pi r^3$
(b) $\frac{3}{4} \pi r^3$
(c) $\frac{4}{3} \pi (R^3 - r^3)$
(d) None of these
6. Volume of hollow cylinder
(a) $\pi(R^2 - r^2)h$
(b) $\pi R^2 h$
(c) $\pi r^2 h$
(d) $\pi r^2 (h_1 - h_1)$
7. The radius of a sphere is 2r, then its volume will be
(a) $\frac{4}{3} \pi r^3$
(b) $4\pi r^3$

(c) $\frac{8}{3} \pi r^3$

(d) $\frac{32}{3} \pi r^3$

8. In a cylinder, radius is doubled and height is halved, curved surface area will be
(a) halved
(b) doubled
(c) same
(d) four time
9. The total surface area of a cone whose radius is r and slant height l is
(a) $2\pi r(l + r)$
(b) $\pi r(l + \frac{r}{4})$
(c) $\pi r(l + r)$
(d) $2\pi rl$
10. The radius of a hemispherical balloon increases from 6 cm to 12 cm as air is being pumped into it. The ratios of the surface areas of the balloon in the two cases is
(a) 1 : 4
(b) 1 : 3
(c) 2 : 3
(d) 2 : 1
11. The length of the longest pole that can be put in a room of dimension (10 m $\times$ 10 m $\times$ 5 m) is
(a) 15 m
(b) 16 m
(c) 10 m
(d) 12 m
12. The lateral surface area of a cube is 256 m^2 . The volume of the cube is
(a) 512 m^3
(b) 64 m^3
(c) 216 m^3
(d) 256 m^3
13. The radii of two cylinders are in the ratio of 2 : 3 and their heights are in the ratio of 5 : 3. The ratio of their volumes is
(a) 10 : 17
(b) 20 : 27
(c) 17 : 27
(d) 20 : 37
14. A cone is 8.4 cm high and the radius of its base is 2.1 cm. It is melted and recast into a shape. The radius of the sphere is
(a) 4.2 cm
(b) 2.1 cm
(c) 2.4 cm
(d) 1.6 cm

15. The total surface area of a cube is 96 cm^2 . The volume of the cube is
- (a) 8 cm^3
 - (b) 512 cm^3
 - (c) 64 cm^3
 - (d) 27 cm^3

- 1. C
- 2. B
- 3. C
- 4. B
- 5. C
- 6. A
- 7. D
- 8. C
- 9. B
- 10. A
- 11. A
- 12. A
- 13. B
- 14. B
- 15. C