



# MATHS

## BOOKS - NAVNEET PUBLICATION

### SURFACE AREA AND VOLUME

#### Question Bank

1. Find the volume of a box if its length, breadth and height are 20 cm, 10.5 cm and 8 cm respectively.



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2. A cuboid shaped soap bar has volume 150 cc. Find its thickness if its length is 10 cm and breadth is 5 cm.



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3. How many bricks of length 25 cm, breadth 15 cm and height 10 cm are required to build a

wall of length 6 m height 2.5 m and breadth 0.5m ?



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4. For rain water harvesting a tank of length 10 m, breadth 6 m and depth 3 m is built. What is the capacity of the tank? How many litres of water can it hold?



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5. In each example given below, radius of base of a cylinder and its height are given. Then find the curved surface area and total surface area.

$$r = 7\text{cm}, h = 10\text{ cm}$$



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6. In each example given below, radius of base of a cylinder and its height are given. Then find the curved surface area and total surface area.

$$r = 1.4\text{ cm}, h = 2.1\text{ cm}$$





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7. In each example given below, radius of base of a cylinder and its height are given. Then find the curved surface area and total surface area.

$$r = 2.5 \text{ cm}, h = 7 \text{ cm}$$



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8. In each example given below, radius of base of a cylinder and its height are given. Then find

the curved surface area and total surface area.

$$r = 70 \text{ cm}, h = 1.4 \text{ cm}$$



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**9.** In each example given below, radius of base of a cylinder and its height are given. Then find the curved surface area and total surface area.

$$r = 4.5 \text{ cm}, h = 14 \text{ cm}$$



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**10.** Find the total surface area of the closed cylindrical drum if its diameter is 50 cm and height is 45 cm.



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**11.** Find the area of base and radius of a cylinder if its curved surface area is 660sq cm and height is 21 cm.



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**12.** Find the area of the sheet required to make a cylindrical container. Which is open at one side and whose diameter is 28 cm and height is 20 cm. Find the approximate area of the sheet required to make a lid of height 2 cm for this container.



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**13.** Find the volume of the cylinder if height ( $h$ ) and radius ( $r$ ) are as given below

$$r = 10.5 \text{ cm}, h = 8 \text{ cm}$$





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**14.** Find the volume of the cylinder if height ( $h$ ) and radius ( $r$ ) are as given below

$$r = 2.5 \text{ cm}, h = 7 \text{ cm}$$



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**15.** Find the volume of the cylinder if height ( $h$ ) and radius ( $r$ ) are as given below

$$r = 4.2 \text{ cm}, h = 5 \text{ cm}$$





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**16.** Find the volume of the cylinder if height (h) and radius (r) are as given below

$$r = 5.6 \text{ cm}, h = 5 \text{ cm}$$



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**17.** How much iron is needed to make a rod of length 90 cm and diameter 1.4 cm ?



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**18.** How much water will a tank hold if the interior diameter of the tank is 1.6m and its depth is 0.7m ?



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**19.** Find the volume of the cylinder if the circumference of the cylinder is 132 cm and height is 25 cm.



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20. The height of a cylinder is 21 cm and the radius of its base is 5 cm then its curved surface area is.....

A. 660 sq. cm.

B. 660 cu. cm.

C. 66 sq. cm.

D. 66 cu cm.

**Answer: A**



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21. If the side of the cube is 1 m then its volume is .....

A.  $10000cm^3$

B.  $100cm^3$

C.  $100000cm^3$

D.  $1000000cm^3$

**Answer: D**



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22. If the length of the cuboid is 10 cm, its breadth is 12 cm and height is 5 cm then it's volume is .....

A. 120 cu cm

B. 60 cu cm

C. 600 cu cm

D. 50 cu cm

**Answer: C**



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23. If the circumference of the base of the cylinder is 114 cm and its height is 10 cm then the curved surface area of the cylinder is .....

A. 114 sq cm

B. 10 sq cm

C. 570 sq cm

D. 1140 sq cm

**Answer: D**



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24. The Euler's formula is .....

A.  $F - V = E + 2$

B.  $F + V = E - 2$

C.  $F + E = V + 2$

D.  $F + V = E + 2$

**Answer: D**



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25. Find the total surface of cube of side 12cm.



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26. Find the volume of the cuboid of dimension  $12 \times 13 \times 15$  in m.



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27. Find the capacity of cubical tank of side 1 m in litres.



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**28.** If the length of the cuboid is 10 cm, its breadth is 12 cm and volume is  $1200 \text{ cm}^3$  then find its height.



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**29.** If the radius of the base of the cylinder is 7 cm and its height is 15 cm, then find its volume



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**30.** If the radius of the base of the cylinder is 21 m and its height is 14 m, then find its curved surface area.



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**31.** If the curved surface area of the cylinder is 1320 sq cm and its height is 10 cm then find its radius.



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**32.** If the area of the base of the cylinder is 90 sq cm and its height is 12 cm, then find its volume.



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**33.** Find the total surface area of the cylindrical object if its radius is 5 cm and height is 10 cm.



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**34.** Find the area of the base of the cuboid if its height is 3 cm and its volume is 450 cu.cm



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**35.** If for a solid figure, the number of faces are 6, vertices are 8, then find the number of edges.



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**36.** If the radius of the base of the cylinder is 2.8 cm and its height to 5.5 cm, then find its Curved surface area



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**37.** If the radius of the base of the cylinder is 2.8 cm and its height to 5.5 cm, then find its Total surface area



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**38.** If the radius of the cylinder is 7.7 m and its curved surface area is 619.52 sq m, then find its height



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**39.** If the radius of the cylinder is 7.7 m and its curved surface area is 619.52 sq m, then find its Total surface area.



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**40.** The inner diameter of a cylindrical shaped tank is 1.6 m and its depth is 0.7 m. Find the maximum amount of water that can be stored in the tank



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**41.** The volume of a cylinder is 2512 cu cm and its height is 12.5 cm. Find the radius of the base.



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**42.** How much metal sheet will be required to make a closed cylinder of height 1m and diameter 140 cm.



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**43.** The total surface area of a cylinder is 2464 sq cm. The height and the radius of the cylinder are equal. Find the radius of the base of the cylinder.



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**44.** How many bricks of length 12.5 cm, breadth 7.5 cm and height 5 cm are required to build a wall of length 12.5 m, height 15 m and breadth 50 cm ?



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**45.** The radius of the base of cylindrical column of a building is 25 cm and its height is 3.5 m. It costs ₹ 15.50 per sq m to paint this

column. What will it cost to paint 10 such columns ?



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