

MCQs for Class 10 Maths Chapter 13 Surface Areas and Volumes

Question 1: Which formula is used to calculate the curved surface area of a cylinder?

Options:

- (A). $2\pi rh$
 - (B). $\pi r^2 h$
 - (C). $2\pi r(r+h)$
 - (D). πr^2
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Question 2: The total surface area of a sphere having radius r is:

Options:

- (A). $2\pi r^2$
 - (B). $3\pi r^2$
 - (C). $4\pi r^2$
 - (D). πr^2
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Question 3: Find the correct expression for the volume of a cone.

Options:

- (A). $\pi r^2 h$
 - (B). $\frac{1}{3} \pi r^2 h$
 - (C). $2\pi rh$
 - (D). $\frac{4}{3} \pi r^3$
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Question 4: A cylinder has radius r and height h . Which formula gives its volume?

Options:

- (A). $2\pi rh$
 - (B). $\pi r^2 h$
 - (C). $\frac{1}{3} \pi r^2 h$
 - (D). $4\pi r^2$
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Question 5: The curved surface area of a cone is calculated by using:

Options:

- (A). $\pi r l$
 - (B). $2\pi rh$
 - (C). πr^2
 - (D). $\pi r^2 h$
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Question 6: What is the volume of a sphere with radius r ?

Options:

- (A). $\pi r^2 h$
 - (B). $\frac{4}{3} \pi r^3$
 - (C). $4\pi r^2$
 - (D). $2\pi rh$
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Question 7: Choose the correct formula for the total surface area of a cylinder.

Options:

- (A). $2\pi rh$
 - (B). $\pi r^2 h$
 - (C). $2\pi r(r+h)$
 - (D). $\pi r l$
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Question 8: Which symbol is generally used to represent the slant height of a cone?

Options:

- (A). r
 - (B). h
 - (C). l
 - (D). d
-

Question 9: The total surface area of a hemisphere is equal to:

Options:

- (A). $2\pi r^2$
 - (B). $3\pi r^2$
 - (C). $4\pi r^2$
 - (D). πr^2
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Question 10: Find the curved surface area of a hemisphere.

Options:

- (A). πr^2
 - (B). $2\pi r^2$
 - (C). $3\pi r^2$
 - (D). $4\pi r^2$
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Question 11: A cone and a cylinder have the same base radius and height. The volume of the cone will be:

Options:

- (A). Equal to the cylinder
 - (B). Double the cylinder
 - (C). One-third the cylinder
 - (D). Half the cylinder
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Question 12: Volume is always measured in:

Options:

- (A). Square units
 - (B). Cubic units
 - (C). Linear units
 - (D). None of these
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Question 13: The outer area covered by a solid object is called:

Options:

- (A). Volume
 - (B). Capacity
 - (C). Surface area
 - (D). Radius
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Question 14: A cube has side length a. What will be its volume?

Options:

- (A). a^2
 - (B). $6a^2$
 - (C). a^3
 - (D). $4a^3$
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Question 15: The total surface area of a cube is:

Options:

- (A). a^2
 - (B). $4a^2$
 - (C). $6a^2$
 - (D). $8a^2$
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Question 16: Which formula is used for finding the total surface area of a cuboid?

Options:

- (A). $2(lb + bh + hl)$
 - (B). lbh
 - (C). $4lbh$
 - (D). $2\pi rh$
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Question 17: The volume of a cuboid is obtained by multiplying:

Options:

- (A). $2(lb + bh + hl)$
 - (B). $l \times b \times h$
 - (C). $6a^2$
 - (D). a^3
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Question 18: The curved surface area of a cylinder mainly depends on:

Options:

- (A). Radius only
 - (B). Height only
 - (C). Radius and height
 - (D). Diameter only
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Question 19: When a rectangle rotates around one of its sides, the solid formed is a:

Options:

- (A). Sphere
 - (B). Cone
 - (C). Cylinder
 - (D). Hemisphere
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Question 20: A sphere has radius 7 cm. What will be its diameter?

Options:

- (A). 7 cm
 - (B). 14 cm
 - (C). 21 cm
 - (D). 28 cm
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Question 21: Which formula helps in finding the slant height of a cone?

Options:

- (A). $l = r + h$
 - (B). $l = \sqrt{r^2 + h^2}$
 - (C). $l = rh$
 - (D). $l = 2r + h$
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Question 22: The total surface area of a cone is:

Options:

- (A). $\pi r l$
 - (B). $\pi r(r + l)$
 - (C). $2\pi r h$
 - (D). $\pi r^2 h$
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Question 23: Find the correct formula for the volume of a hemisphere.

Options:

- (A). $\frac{2}{3} \pi r^3$
 - (B). $\frac{4}{3} \pi r^3$
 - (C). $\pi r^2 h$
 - (D). $2\pi r^2$
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Question 24: Which one of these solids does not have any curved surface?

Options:

- (A). Cone
 - (B). Sphere
 - (C). Cube
 - (D). Cylinder
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Question 25: The capacity of a container is commonly measured in:

Options:

- (A). Square units
 - (B). Cubic units
 - (C). Litres
 - (D). Metres
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Answers

1. (A). $2\pi rh$
2. (C). $4\pi r^2$
3. (B). $\frac{1}{3} \pi r^2 h$
4. (B). $\pi r^2 h$
5. (A). $\pi r l$
6. (B). $\frac{4}{3} \pi r^3$
7. (C). $2\pi r(r+h)$
8. (C). l
9. (B). $3\pi r^2$
10. (B). $2\pi r^2$
11. (C). One-third the cylinder
12. (B). Cubic units
13. (C). Surface area
14. (C). a^3

15. (C). $6a^2$
16. (A). $2(lb + bh + hl)$
17. (B). $l \times b \times h$
18. (C). Radius and height
19. (C). Cylinder
20. (B). 14 cm
21. (B). $l = \sqrt{(r^2 + h^2)}$
22. (B). $\pi r(r + l)$
23. (A). $\frac{2}{3} \pi r^3$
24. (C). Cube
25. (C). Litres

