

Important Questions for Class 7 Maths Chapter 13: Solving important questions from Chapter 13, Visualising Solid Shapes is beneficial for Class 7 students. These questions help students build a strong foundation in understanding three-dimensional geometry which is important for their overall mathematical development.

By tackling these questions, students not only enhance their spatial reasoning and problem-solving skills but also gain confidence in handling complex 3D problems. Preparing with these questions ensures better comprehension and prepares students for exams with a clear understanding of geometric shapes and their properties.

Important Questions for Class 7 Maths Chapter 13 Overview

Visualising Solid Shapes refers to the ability to understand and interpret three-dimensional (3D) objects from different perspectives. In mathematics, this skill involves imagining and manipulating solid figures such as cubes, cuboids, cones, cylinders, spheres, and pyramids within our minds. It requires understanding the spatial relationships between faces, edges, and vertices of these shapes.

This concept is fundamental in geometry as it helps students visualize how shapes fit together in space, which is crucial for solving problems involving volume, surface area, and spatial reasoning. By practicing with nets (2D representations that can be folded to form 3D shapes), viewing shapes from different angles, and interpreting various perspectives of a solid, students develop a deeper understanding of the properties and attributes of solid figures.

Visualising Solid Shapes not only enhances mathematical thinking but also aids in real-world applications such as architecture, engineering, and design. It encourages students to think critically about space, shapes, and their interrelationships, making it a valuable skill in both academic and everyday contexts.

Important Questions for Class 7 Maths Chapter 13 PDF

Solving important questions from Chapter 13 Visualising Solid Shapes is important for Class 7 students as it helps them develop a strong foundation in spatial reasoning and understanding three-dimensional geometry.

The provided PDF link contains a list of collection of important questions along with their solutions providing a valuable practice material for reinforcing learning and preparing effectively for exams. You can access the PDF link below for easy access to these important questions.

Important Questions for Class 7 Maths Chapter 13 PDF

Important Questions for Class 7 Maths Chapter 13 Visualising Solid Shapes

Here are some important questions from Class 7 Maths Chapter 13 Visualising Solid Shapes along with their solutions:

Question 1. If three cubes of dimensions $2\text{ cm} \times 2\text{ cm} \times 2\text{ cm}$ are placed end to end, what would be the dimension of the resulting cuboid?

Solution:

- **Length of the resulting cuboid** = $2\text{ cm} + 2\text{ cm} + 2\text{ cm} = 6\text{ cm}$
- **Breadth** = 2 cm
- **Height** = 2 cm
- Hence, the required dimensions = $6\text{ cm} \times 2\text{ cm} \times 2\text{ cm}$.

Question 2. Answer the following: (i) Why a cone is not a pyramid? (ii) How many dimensions a solid have? (iii) Name the solid having one curved and two flat faces but no vertex.

Solution: (i) A cone is not a pyramid because its base is not a polygon. (ii) Three. (iii) Cylinder.

Question 3. Write down the number of edges on each of the following solid figures: (i) Cube (ii) Tetrahedron (iii) Sphere (iv) Triangular prism

Solution: (i) 12 edges (ii) 6 edges (iii) 0 edges (iv) 9 edges

Question 4. What cross-section do you get when you give a horizontal cut to an ice cream cone?

Solution: Circle.

Question 5. Determine the number of edges, vertices, and faces in the given figure.

Solution:

- **Edges** = 8
- **Vertices** = 5
- **Faces** = 5

Question 6. Draw the sketch of two figures that have no edges.

Solution:

- Sphere
- Cone

Question 7. Draw the sketches of two figures that have no vertices.

Solution:

- Cylinder
- Sphere

Question 8. Name any three objects which resemble a sphere and cone.

Solution:

- Sphere: Football, Earth, Round table
- Cone: Conical funnel, ice cream cone, conical cracker

Question 9. What shape would we get from the given figure?

Solution: From the given net, we get a rectangular pyramid.

Question 10. Fill in the blanks:

- Plane figure is also called _____
- A solid shape that has only a curved surface is called a _____
- A _____ is a solid whose bases are identical polygon faces and other faces are rectangles.
- A pyramid is a solid whose base is a flat _____ figure and whose side faces are triangles having a common vertex outside the surface of the _____
- A triangular pyramid in which all faces are equal is called _____
- A _____ of a solid figure demonstrates how it is constructed by showing its sides, faces, and vertices.
- To make a solid from a sheet of flat paper, we need to construct a _____
- A line where two faces of a solid meet is called its _____
- The term isometric refers to _____
- The below figure is the net of _____
- A triangular prism has _____ faces, _____ edges, and _____ vertices.
- A triangular pyramid has _____ faces, _____ edges, and _____ vertices.

Solution:

- i. 2D figure
- ii. sphere
- iii. prism
- iv. polygon, base
- v. regular tetrahedron
- vi. net
- vii. net
- viii. edge
- ix. proportion to length/equal measure
- x. triangular prism
- xi. 5, 9, 6
- xii. 4, 6, 4

Benefits of Solving Important Questions for Class 7 Maths Chapter 13

Solving important questions for Class 7 Maths Chapter 13 Visualising Solid Shapes provide several benefits to students:

Understanding Concepts: These questions help in reinforcing the basic concepts related to solid shapes, such as their types, properties, and the relationships between their dimensions. By solving these questions, students gain a deeper understanding of the characteristics of different solid shapes like cubes, cones, pyramids, and prisms.

Enhancing Problem-Solving Skills: These questions challenge students to think critically and solve problems involving visualizing three-dimensional shapes from two-dimensional nets or vice versa. This not only improves their logical reasoning but also sharpens their spatial awareness and geometric visualization skills.

Preparation for Higher Studies: The topics covered in these questions form the foundation for more advanced studies in geometry. Regular practice prepares students for higher-level mathematics where concepts of solids and their properties are further explored.

Boosts Confidence: Regular practice with these questions helps students build confidence in tackling geometric problems. The solutions provide step-by-step guidance, which reinforces learning and builds a positive attitude towards problem-solving.

Time Management: By solving these questions, students learn to manage their time effectively during exams. They practice solving problems within a time limit, which is crucial for success in timed tests.