Important Questions for Class 9 Maths Chapter 11: Here are the Important Questions for Class 9 Maths Chapter 11 Constructions focus on the important concepts and techniques needed for geometric constructions. These questions cover various topics, such as constructing angles, bisecting angles and drawing perpendicular lines.

Understanding these concepts is important for developing spatial reasoning and problem-solving skills in geometry. Practicing these important questions will enhance problem-solving skills and boost confidence for exams. By mastering the concepts in this chapter students can build a strong foundation for more advanced studies in geometry.

Important Questions for Class 9 Maths Chapter 11 Overview

Important Questions for Class 9 Maths Chapter 11 focus on key construction techniques in geometry. These questions are created by subject experts of Physics Wallah to help students grasp essential concepts like angle construction, bisecting angles and drawing parallel lines.

By practicing these questions, students can enhance their understanding of geometric principles and improve their construction skills. This overview emphasizes the importance of these exercises in building a solid foundation for further studies in mathematics and geometry.

Important Questions for Class 9 Maths Chapter 11 PDF

The PDF for Important Questions for Class 9 Maths Chapter 11 is available below. This PDF contains a important questions designed to help students in mastering the concepts of constructions in geometry.

By practicing these questions, students can enhance their understanding and improve their skills in drawing geometric figures accurately. Make sure to download the PDF to access all the important questions and boost your preparation for exams.

Important Questions for Class 9 Maths Chapter 11 PDF

Important Questions CBSE Class 9 Maths Chapter 11 Constructions

Here we have provided Important Questions CBSE Class 9 Maths Chapter 11 Constructions-

Question 1:

Construct an equilateral triangle, given its side 4cm and justify the construction.

Solution:

Construction Procedure:

1. Let draw a line segment AB=4 cm.
2. With A and B as centres, draw two arcs on the line segment AB and note the point as D and E.
3. With D and E as centres, draw the arcs that intersect the previous arc respectively that forms an angle of 60° each.
4. Now, draw the lines from A and B that are extended to meet each other at point C.
5. Therefore, ABC is the required triangle.

Justification:

From construction, it is observed that

AB = 4 cm, $\angle A = 60°$ and $\angle B = 60°$

We know that, the sum of the interior angles of a triangle is equal to 180°

$\angle A + \angle B + \angle C = 180°$

SuBstitute the values

$\Rightarrow 60° + 60° + \angle C = 180°$

$\Rightarrow 120° + \angle C = 180°$

$\Rightarrow \angle C = 60°$

While measuring the sides, we get

BC = CA = 4 cm (Sides opposite to equal angles are equal)

AB = BC = CA = 4 cm

$\angle A = \angle B = \angle C = 60°$

Hence, justified.

Question 2:

Construct a triangle ABC in which BC = 7cm, $\angle B = 75°$ and AB + AC = 13 cm.

Solution:

Construction Procedure:

The steps to draw the triangle of given measurement is as follows:

1. Draw a line segment of base BC = 7 cm
2. Measure and draw ∠B = 75° and draw the ray BX
3. Take a compass and measure AB + AC = 13 cm.
4. With B as a centre and draw an arc at the point be D
5. Join DC
6. Now draw the perpendicular bisector of the line BD and the intersection point is taken as A.
7. Now join AC
8. Therefore, ABC is the required triangle.

Question 3:

Construct a triangle XYZ in which ∠Y = 30°, ∠Z = 90° and XY + YZ + ZX = 11 cm.

Solution:

Construction Procedure:

The steps to draw the triangle of given measurement is as follows:

1. Draw a line segment AB which is equal to XY + YZ + ZX = 11 cm.
2. Make an angle ∠Y = 30° from point A and the angle be ∠LAB
3. Make an angle ∠Z = 90° from point B and the angle be ∠MAB
4. Bisect ∠LAB and ∠MAB at point X.
5. Now take the perpendicular bisector of the line XA and XB and the intersection point be Y and Z respectively.
6. Join XY and XZ
7. Therefore, XYZ is the required triangle.

Question 4:

Construct a triangle ABC in which BC = 8cm, ∠B = 45° and AB – AC = 3.5 cm.

Solution:

Construction Procedure:

The steps to draw the triangle of given measurement is as follows:

1. Draw a line segment of base BC = 8 cm
2. Measure and draw ∠B = 45° and draw the ray BX
3. Take a compass and measure AB – AC = 3.5 cm.
4. With B as centre and draw an arc at the point be D on the ray BX
5. Join DC

6. Now draw the perpendicular bisector of the line CD and the intersection point is taken as A.
7. Now join AC
8. Therefore, ABC is the required triangle.

Question 5:

Draw a line segment AB of 4 cm in length. Draw a line perpendicular to AB through A and B, respectively. Are these lines parallel?

Solution:

According to the question,

A line segment AB of length 4cm.

To draw a perpendicular to AB through A and B, respectively.

Steps of construction:

1. Draw AB = 4 cm.

2. With A as centre, draw an arc, intersecting AB at P.

3. With P as centre and the same radius, draw an arc intersecting the arc drawn in step 2 at Q.

4. With Q as centre and the same radius, draw an arc, intersecting the arc drawn in step 3 at R.

5. With R as centre and the same radius, draw an arc, intersecting the arc drawn in step 5 at X.

6. Draw OX and produced it to C and D.

7. Now, repeat the steps from 2 to 7 to draw the line EF perpendicular through B.

Yes, these lines are parallel because the sum of the interior angles on the same side of the transversal is 180 degrees.

Benefits of Practicicng Important Questions for Class 9 Maths Chapter 11

Practicing important questions for Class 9 Maths Chapter 11 on constructions provides several advantages for students:

Strengthened Conceptual Understanding: Regular practice helps students grasp the fundamental concepts of constructions, such as the use of a compass and ruler, angle bisectors, and perpendicular bisectors.

Development of Precision Skills: Working on construction problems enhances students precision and accuracy, which are essential when drawing geometric figures and ensuring they meet the required specifications.

Boosted Confidence: Familiarity with important questions increases students confidence, enabling them to approach exams with a positive mindset and reducing test anxiety.

Better Exam Preparation: Concentrating on important questions ensures students are well-prepared for their assessments, as these questions often reflect the types of problems they will encounter in exams helping them to achieve higher marks.