



Class 9 Maths – Chapter 5



Exercise 5.6 – Questions with Answer Key

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Exercise Set 5.6 contains **1 question**, based on the relationship between a **central angle** and the **length of a chord**.

1. ★ Find the Length of the Chord

Question:

In a circle with centre **O**, the central angle $\angle AOB = 60^\circ$. If the radius of the circle is **12 cm**, find the length of chord **AB**.



Solution:

Given:

$$OA = OB = 12 \text{ cm}$$

and

$$\angle AOB = 60^\circ$$

Since OA and OB are radii:

$$OA = OB$$

Therefore, $\triangle AOB$ is an **isosceles triangle**.

Since:

$$\angle AOB = 60^\circ$$

The other two angles are:

$$\angle OAB = \angle OBA = (180^\circ - 60^\circ)/2$$

$$= 60^\circ$$

Therefore, all three angles are 60° .

So, $\triangle AOB$ is an **equilateral triangle**.

Hence:

$$AB = OA = OB$$

✓ **Answer:**

$$AB = 12 \text{ cm}$$

ANSWER KEY

Q1. $\rightarrow 12 \text{ cm}$ ★

Key Concept

If a chord subtends **60° at the centre**, the triangle formed by the **two radii and the chord** is equilateral.

Therefore:

Chord length = Radius

For this question:

$$AB = 12 \text{ cm}$$

This follows from the chapter's result that the triangle formed by a chord and the centre is isosceles, together with the given 60° central angle.