

# Circle

Chapter 17: Circle · Topic 1

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## Key Concept

A chord is a line segment connecting two points on a circle, and the diameter is the longest possible chord, passing through the centre.

A tangent touches a circle at exactly one point, and it is always perpendicular to the radius drawn to that point.

The angle subtended by an arc at the centre is twice the angle subtended by the same arc at any point on the remaining circle.

Understanding circle theorems helps us solve geometry problems involving circular shapes, arcs, and angles.

## Quick Revision Notes

- A chord connects two points on a circle.
- The diameter is the longest chord, through the centre.
- A tangent touches a circle at one point.
- A tangent is perpendicular to the radius at that point.
- Central angle =  $2 \times$  angle at the remaining circle (same arc).
- This is a key circle theorem.
- These theorems solve circular geometry problems.
- Understanding circles builds strong geometry skills.

## Practice Questions

- 1 Draw a circle and label a chord, diameter and tangent.
- 2 Verify the tangent-radius perpendicularity.
- 3 Discuss the central-inscribed angle theorem.
- 4 Solve a problem using a circle theorem.
- 5 Research another circle theorem.
- 6 Explain circle terminology in your own words.