

# Construction of Polygons

Chapter 15: Construction of Polygons · Topic 1

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## Key Concept

To construct a regular polygon, we can use the central angle formula ( $360^\circ/n$ ) to divide a circle into equal parts, connecting the points.

For irregular polygons, we typically need enough given measurements (like sides and angles) to uniquely determine the shape.

We use a ruler for accurate lines, a protractor for measuring angles, and a compass for arcs and equal distances.

Practising polygon construction builds precision and understanding of geometric relationships between angles and sides.

## Quick Revision Notes

- Regular polygons use central angle  $360^\circ/n$ .
- This divides a circle into equal parts.
- Points are connected to form the polygon.
- Irregular polygons need enough given measurements.
- A ruler draws accurate lines.
- A protractor measures angles.
- A compass draws arcs and equal distances.
- Practice builds precision and geometric understanding.

## Practice Questions

- 1 Construct a regular pentagon using the central angle method.
- 2 Calculate the central angle for a regular octagon.
- 3 Practice constructing a quadrilateral with given measurements.
- 4 Discuss why a protractor is essential for construction.
- 5 Construct a regular hexagon.
- 6 Explain the central angle formula in your own words.