

Constructing Line Segments and Circles

Chapter 8: Playing with Constructions · Topic 1

Key Concept

To copy a line segment's exact length using a compass (without measuring with a ruler again), place the compass point on one end of the original segment and open it to the other end, then transfer this exact width to construct a new segment of identical length elsewhere. This compass-based technique ensures precision that might be lost with repeated ruler measurements, and is a fundamental geometric construction skill used throughout more advanced geometry.

Quick Revision Notes

- A line segment is constructed using a ruler for a specified length.
- A circle of given radius is drawn by setting the compass width to that radius.
- A compass can copy an exact segment length without re-measuring with a ruler.
- Precise geometric construction is a foundational skill for advanced geometry.

Practice Questions

- 1 Construct a circle of radius 3 cm using a compass.
- 2 Use a compass to copy the length of a given line segment onto a new line.
- 3 Explain why using a compass to copy a length can be more precise than measuring twice with a ruler.