

Congruent Figures

Chapter 9: Geometric Twins · Topic 1

Key Concept

Congruence is different from similarity — congruent figures must be identical in both shape and size, while similar figures only need the same shape (proportional sizes are allowed). Testing for congruence is fundamental in geometric proofs, and real-world applications include manufacturing (ensuring identical parts, like bolts of the same size, are truly congruent) and quality control processes.

Quick Revision Notes

- Congruent figures have exactly the same shape and size.
- Congruent triangles have equal corresponding sides and equal corresponding angles.
- Tests for triangle congruence include SSS and SAS.
- Congruence differs from similarity, which only requires the same shape, not necessarily the same size.

Practice Questions

- 1 Check if two given triangles are congruent by comparing their sides.
- 2 Explain the difference between congruent and similar figures.
- 3 Give a real-world example where congruent shapes are important, like in manufacturing.