

Angles Made by a Transversal

Chapter 6: Lines and Angles · Topic 2

Key Concept

These angle relationships work in both directions as a powerful geometric tool: if a transversal creates equal corresponding angles (or equal alternate interior angles) with two lines, this proves the two lines must be parallel — a technique frequently used to prove parallelism in geometric problems without needing to measure the lines' actual distance apart at every point along their length.

Quick Revision Notes

- Corresponding angles (matching position at each intersection) are equal for parallel lines.
- Alternate interior angles (opposite sides, between the lines) are equal for parallel lines.
- Co-interior angles (same side, between the lines) are supplementary (sum to 180°) for parallel lines.
- Equal corresponding/alternate angles can be used to PROVE two lines are parallel.

Practice Questions

- 1 Identify a pair of corresponding angles in a transversal diagram.
- 2 If one angle formed by a transversal on parallel lines is 70° , find its co-interior angle.
- 3 Explain how equal alternate interior angles can be used to prove two lines are parallel.