

Parallel Lines

Chapter 2: Parallel Lines · Topic 1

Key Concept

Parallel lines are lines in the same plane that never meet, no matter how far they are extended in either direction.

A transversal is a line that crosses two or more other lines, creating various angle relationships when crossing parallel lines.

When a transversal crosses parallel lines, corresponding angles are equal, and alternate angles are also equal.

Co-interior (same-side interior) angles formed by a transversal crossing parallel lines are supplementary, summing to 180° .

Quick Revision Notes

- Parallel lines: never meet, same plane.
- Constant distance apart, extended infinitely.
- Transversal: crosses two or more lines.
- Creates angle relationships with parallel lines.
- Corresponding angles: equal.
- Alternate angles: also equal.
- Co-interior angles: supplementary (sum to 180°).
- These properties solve angle problems.

Practice Questions

- 1 Draw two parallel lines with a transversal.
- 2 Identify corresponding angles in your diagram.
- 3 Identify alternate angles in your diagram.
- 4 Verify that co-interior angles sum to 180° .
- 5 Solve for a missing angle using these properties.
- 6 Explain parallel line angle relationships in your own words.