

Basic Terms and Angle Pairs

Chapter 6: Lines and Angles · Topic 1

Key Concept

For example, if two lines cross and one of the four resulting angles measures 65° , the angle directly opposite it (vertically opposite) also measures 65° , while the two angles adjacent to it (forming linear pairs with the 65° angle) each measure $180^\circ - 65^\circ = 115^\circ$. These fundamental angle relationships, proven through basic geometric reasoning, are used repeatedly throughout more advanced geometric proofs involving parallel lines, triangles, and polygons.

Quick Revision Notes

- A linear pair of angles always sums to 180° (forms a straight line).
- Vertically opposite angles, formed by two intersecting lines, are always equal.
- If one angle at an intersection is 65° , its vertical angle is also 65° , and adjacent angles are 115° .
- These angle relationships are foundational for more advanced geometric proofs.

Practice Questions

- 1 If one angle in a linear pair is 65° , find the other.
- 2 Two lines intersect, forming one angle of 40° . Find the other three angles formed.
- 3 Explain why vertically opposite angles are always equal.