

Properties of a Triangle's Angles

Chapter 7: A Tale of Three Intersecting Lines · Topic 1

Key Concept

This property can be demonstrated practically by tearing off the three corners of a paper triangle and arranging them together — they will always form a straight line (180°). This angle sum property is essential for solving many geometry problems, verifying whether a triangle's angles are correctly measured, and forms the basis for angle-related properties in other polygons, since any polygon can be divided into triangles to calculate its total angle sum.

Quick Revision Notes

- The sum of the angles in any triangle is always 180° .
- This can be demonstrated by tearing a paper triangle's corners and arranging them into a straight line.
- The third angle can be found by subtracting the sum of the other two from 180° .
- This property forms the basis for finding angle sums in other polygons.

Practice Questions

- 1 Find the third angle if two angles of a triangle are 50° and 60° .
- 2 Verify the angle sum property using a paper triangle experiment.
- 3 If a triangle has two equal angles of 45° each, find the third angle.