

Angle facts and parallel lines

Pearson Edexcel GCSE Mathematics 1MA1 • L025

Foundation and Higher • Lesson resources

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Purpose

Calculate missing angles and justify each step using named angle facts and marked parallel lines.

Vocabulary

Vertex: meeting point of rays. Transversal: line crossing two lines. Corresponding: matching position. Alternate: opposite sides of a transversal between the lines. Supplementary: sum of 180° .

Why the method works

A straight angle is half a turn, 180° ; a full turn is 360° . At intersecting lines, opposite angles are equal because each supplements the same adjacent angle. With parallel lines, corresponding and alternate angles are equal; co-interior angles sum to 180° . A diagram that merely looks parallel is insufficient.

Method and checking

Mark known angles and parallel arrows. Identify a relationship before calculating. Write an equality or sum, solve, then check the angle type. Use the diagram sheet to trace the relevant rays.

Common errors and next attempt

If every angle is copied, contrast an alternate pair with a co-interior pair. If parallelism is assumed, remove the arrows and ask what remains known. Recheck a 68° angle with its supplement, 112° .