Lesson 76 MIXED

Angle sum of a quadrilateral

WHAT THIS LESSON TEACHES

The four interior angles of any quadrilateral always add to 360 degrees.

→ 90 + 90 + 90 + 90 = 360

→ 100 + 80 + 100 + 80 = 360

MODEL THIS ON THE BOARD

FINDING THE MISSING ANGLE

1. Split the quadrilateral into two triangles by drawing one diagonal.
2. Each triangle sums to 180 degrees so together they make 2 x 180 = 360 degrees.
3. Add the three known angles then subtract from 360 to find the fourth.

ANSWER KEY

a) 360°

b) 360°

c) 360°

Q1: 30°

Q2: 100°

Q3: 50°

Q4: 125°

Q5: 75°

a) Always — This is the rule for any four-sided shape.

b) Never — They always add to exactly 360 degrees.

c) Always — Two triangles each sum to 180 degrees.

d) Never — Only special ones like squares and rectangles do.

EXTENSION SHEET · STRETCH ANSWERS

S1: 11°

S2: 99°

S3: 37°

S4: 30°

S5: 106°

Investigation: Angle sums of polygons — open-ended; scan pupils' working for valid solution paths rather than a single answer.