

Lesson 78 SHAPE & SPACE

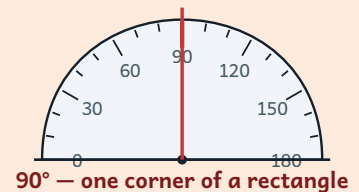
Angle sums in triangles and quadrilaterals – 180° and 360°

WHAT THIS LESSON TEACHES

The four angles inside any quadrilateral always add up to 360° . If you know three of them, subtract from 360° to find the fourth.

→ A rectangle has four right angles: $90^\circ + 90^\circ + 90^\circ + 90^\circ = 360^\circ$.

→ Quadrilateral with angles 70° , 110° , 90° : fourth = $360^\circ - 70^\circ - 110^\circ - 90^\circ = 90^\circ$.



MODEL THIS ON THE BOARD

FIND THE MISSING ANGLE. TWO ANGLES ARE 60° AND 80° .

- 1 Angles in a triangle add up to 180° .
- 2 Add the two known angles: $60^\circ + 80^\circ = 140^\circ$.
- 3 Subtract from 180° : $180^\circ - 140^\circ = 40^\circ$.

ANSWER KEY

a) 90° , 90° , 90° : 90°

b) 100° , 80° , 100° : 80°

c) 60° , 60° , 120° : 120°

d) 110° , 95° , 70° : 85°

e) 140° , 40° , 90° : 90°

f) 75° , 105° , 75° : 105°

Q1: 30°

Q2: 44°

Q3: 11°

Q4: 46°

EXTENSION SHEET · STRETCH ANSWERS

S1: 37°

S2: 57°

S3: 99°

S4: 74°

S5: 58°