

Angle sum of a quadrilateral

MODULE 7 · 2D SHAPE, 3D SHAPE AND ANGLES SHAPE & SPACE

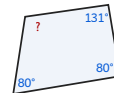
HOW TO ANSWER TODAY

- **Quadrilateral angles.** Quadrilateral angles add to 360° . Add the three you know, then subtract from 360° .

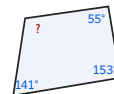
$$70^\circ + 80^\circ + 90^\circ = 240^\circ. 360^\circ - 240^\circ = 120^\circ$$

STRETCH PROBLEMS

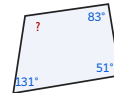
- 1 Cian is making a papier-mâché mask for the school play. The face panel is a quadrilateral with three angles of 80° , 80° and 131° . What is the fourth angle?



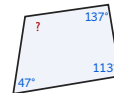
- 2 In 6th class art, Cian cuts a quadrilateral piece of card for a collage. Three of the angles measure 141° , 153° and 55° . What is the fourth angle?



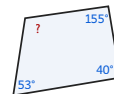
- 3 Tadhg is measuring angles on a homemade Snakes and Ladders board. One four-sided space has angles of 131° , 51° and 83° . What is the fourth angle?



- 4 Tadhg is drawing a scale plan of the school garden on grid paper. One flower bed is a quadrilateral with three angles measuring 47° , 113° and 137° . What is the fourth angle?



- 5 Saoirse is cutting a shape for a collage from a large sheet of card. The shape is a quadrilateral and three of its corner angles measure 53° , 40° and 155° . What is the fourth angle?



INVESTIGATE

Angle sums of polygons

Split a pentagon, then a hexagon, into triangles from one corner. Use the triangles to find each shape's angle sum. Can you predict the angle sum of a shape with 10 sides?



SHAPE & SPACE