

Angle-related problem-solving

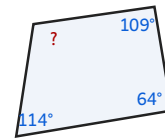
MODULE 7 · 2D SHAPE, 3D SHAPE AND ANGLES SHAPE & SPACE

HOW TO ANSWER TODAY

- **Quadrilateral angles.** Quadrilateral angles add to 360° . Add the three you know, then subtract from 360° .
 $70^\circ + 80^\circ + 90^\circ = 240^\circ$. $360^\circ - 240^\circ = 120^\circ$
- **Read a protractor.** Protractors have two scales. Pick the one that reads 0° on the side the angle's first arm sits on.
 First arm on outer $0^\circ \rightarrow$ use the outer scale to read the second arm
- **Pairs of angles.** Complementary $\rightarrow$ add to 90° . Supplementary $\rightarrow$ add to 180° . Around a point $\rightarrow$ add to 360° .
 Supplementary, one is $55^\circ \rightarrow$ other is $180^\circ - 55^\circ = 125^\circ$

★ STRETCH PROBLEMS

- 1 Oisín is cutting out a four-sided panel for his model bridge during STEM week in 5th class. Three of the corner angles measure 114° , 64° and 109° . What size is the fourth angle?

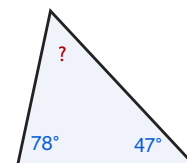


- 2 For Engineers Week, Tadhg's 5th class are marking angles on timber pieces for a woodwork project. When Tadhg lines up his protractor on a corner, one scale reads 57° and the other scale reads 123° . The angle clearly looks acute. Which reading is correct?

- 3 Oisín marks out a straight finish line on the yard for the 5th class mini athletics track. A measuring tape crosses the line and makes two angles on one side that add up to 180° . One of the angles is 106° . What is the other angle?



- 4 Cian draws a triangular reading corner on his scale plan of the 5th class classroom. Two of the angles in the triangle measure 78° and 47° . What is the size of the third angle?



- 5 Saoirse helps paint a new hopscotch design on the school yard. Two of the chalk lines meet at an angle of 158° . Is this angle acute, right, obtuse, straight or reflex?

