

Constructing triangles from given measurements

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

HOW TO ANSWER TODAY

- **Triangle facts.** Equilateral = all 3 sides equal. Isosceles = 2 equal. Scalene = all different. A triangle works only if the two shorter sides ADD UP TO MORE than the longest.
5, 5, 7 → isosceles · 2, 3, 9 → impossible ($2 + 3 = 5 < 9$)
- **Name a 2D shape.** Count sides, check which are equal, count right angles, check parallel pairs. Then name it.
4 equal sides, 0 right angles → rhombus · 4 sides, 1 pair parallel → trapezium

★ STRETCH PROBLEMS

- 1 Niamh draws a triangular bunting flag for the school yard sports day. The three sides of the flag measure **8 cm**, **17 cm** and **17 cm**. What kind of triangle is the flag (equilateral, isosceles, right-angled or scalene)?
- 2 Cian is drawing a treasure hunt map of the school yard and marks a corner with an angle of **78°** between two paths. He bisects the angle to draw a new path exactly down the middle. What is the size of each half angle?
- 3 Méabh is cutting card shapes for the 5th class corridor display. Her teacher asks her to find the shape with **3** sides and exactly **2** equal sides for the tessellation pattern. Which 2D shape should she cut?
- 4 Eoin is sketching a flowerbed for the 5th class school garden. He wants the flowerbed to have **4** sides with exactly **1** pair of parallel sides. Which 2D shape should he draw?
- 5 Saoirse is cutting a triangular cardboard frame for a papier-mâché mask for the school play. The three sides of her frame measure **5 cm**, **9 cm** and **10 cm**. What kind of triangle is the frame (equilateral, isosceles, right-angled or scalene)?

