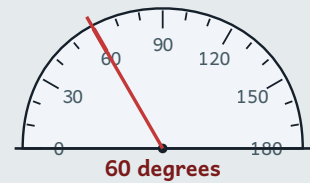


# Constructing triangles from given measurements

MODULE 7 · 2D SHAPE, 3D SHAPE AND ANGLES REVIEW

To **construct** a triangle accurately, use a ruler for the sides and a protractor for the angles, drawing carefully from a base line.

→ Given two sides and the angle between them, draw the base first.



## 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

## WARM-UP

- In maths class, Oisín draws a triangle with sides of **7 cm**, **8 cm** and **9 cm** in his copybook. What kind of triangle has he drawn (equilateral, isosceles, right-angled or scalene)?  
A triangle is constructed with sides 7 cm, 8 cm and 9 cm. What kind of triangle is it (equilateral, isosceles, right-angled or scalene)?
- 5th class are painting a banner for the GAA county finals day. The banner has **4** sides with **2** pairs of parallel sides and **0** right angles, and no two equal sides are next to each other. What 2D shape is the banner?  
Which 2D shape has these properties: 4 sides with 2 pairs of parallel sides and 0 right angles, and no two equal sides next to each other?

## PRACTICE

- 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)?  
A triangle is constructed with sides 5 cm, 9 cm and 10 cm. What kind of triangle is it (equilateral, isosceles, right-angled or scalene)?
- At the after-school crafts club, Oisín is cutting fabric panels for a kite. One panel has **3** sides with exactly **2** sides equal in length. What is the name of this 2D shape?  
Which 2D shape has these properties: 3 sides with exactly 2 equal sides?

## CHALLENGE

- Tadhg is painting a banner for the GAA finals day at the local pitch. The banner has **4** sides, with **1** pair of parallel sides and the other **2** sides equal in length. Which 2D shape is the banner?
- 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)?  
A triangle is constructed with sides 8 cm, 17 cm and 17 cm. What kind of triangle is it (equilateral, isosceles, right-angled or scalene)?