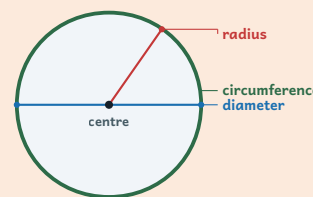


Parts of a circle – centre, radius, diameter, circumference

MODULE 6 · 2D AND 3D SHAPE, ANGLES, SYMMETRY SHAPE & SPACE

Every circle has the same four parts: the **centre** is the middle point; a **radius** runs from the centre to the edge; the **diameter** crosses through the centre from edge to edge (it is **twice the radius**); the **circumference** is the distance all the way round.



- Radius **5 cm** → diameter = **10 cm**.
- Diameter **18 cm** → radius = **9 cm**.
- Every radius of the same circle is exactly the same length.

A CIRCLE HAS RADIUS 7 CM — FIND THE DIAMETER

- 1 The **diameter** crosses from edge to edge through the centre.
- 2 Diameter = $2 \times \text{radius} = 2 \times 7 = \mathbf{14 \text{ cm}}$.
- 3 Check: if you measured straight across the widest point, you'd get 14 cm.

HOW TO ANSWER TODAY

- **Parts of a circle.** Centre = middle point. Radius = centre to edge. Diameter = edge through centre to edge. Circumference = the distance round.
Line from centre to edge → radius · All the way round → circumference
- **Radius ↔ diameter.** Diameter = $2 \times \text{radius}$. Radius = diameter $\div 2$.
Radius 5 cm → diameter 10 cm · Diameter 12 cm → radius 6 cm

WARM-UP

- 1 Aoife is designing a round herb bed for the school garden on grid paper. She draws a straight line that goes all the way across the circle, passing through its centre. What is this line called?
What is the line that goes all the way across a circle through its centre called?
- 2 Saoirse makes a round badge for the 5th class school tour. The badge has a radius of **2 cm**. What is the diameter of the badge?
A circle has a radius of 2 cm. What is its diameter?

PRACTICE

- 1 Tadhg is building a robot in 5th class and fixes a circular wheel to its base. He measures from the centre of the wheel to its edge and gets a radius of **5 cm**. Fill in: the diameter of the wheel is ____ cm.
A circle has a radius of 5 cm. Fill in: the diameter is ____ cm.
- 2 On a school tour to Glendalough, Tadhg spots a circular stepping stone on the path with a radius of **10 cm**. What is the diameter of the stepping stone?
A circle has a radius of 10 cm. What is its diameter?

CHALLENGE

- 1 Saoirse decorates a round biscuit with icing for the Christmas hamper raffle. The biscuit has a diameter of **6 cm**. What is its radius?
- 2 Niamh is making a memory-match game with circular cards for her 5th class. Each card has a radius of **2.3 cm**. What is the diameter of each card?
A circle has a radius of 2.3 cm. What is its diameter?