

Constructing circles and exploring their parts

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

HOW TO ANSWER TODAY

- **Radius ↔ diameter.** Diameter = $2 \times$ radius. Radius = diameter $\div 2$.
Radius 5 cm → diameter 10 cm · Diameter 12 cm → radius 6 cm
- **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
- **Compass drawing.** Set the compass opening to the radius. Hold the point still; sweep the pencil all the way round.

★ STRETCH PROBLEMS

- 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 On the school tour to Glendalough, Cian draws a circular logo for the bus window that has a diameter of **10 cm**. What do we call the line from the centre to the edge of the circle, and how long is it?
- 3 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?
- 4 Saoirse is planning the school garden on grid paper, with herbs planted in three rings around a central bird feeder. She needs to draw three concentric circles with radii **3 cm**, **5 cm** and **7 cm** to mark the planting positions. Mark the centre with a small cross first, then re-set the compass between each circle. Can you draw the three circles for her plan?
- 5 Cian and Aoife are setting up a coin-toss target on the yard for their lunchtime game. They want to draw a circle with a radius of **6.5 cm** on a sheet of card to mark the target. Use your compass and ruler to draw the circle, checking the spread against the half-centimetre tick before you start.



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