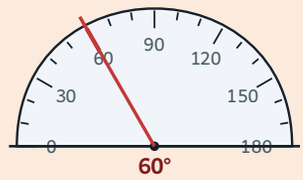
Measuring angles with a protractor

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

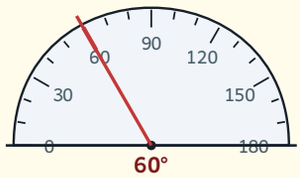
Place the protractor's **centre** on the vertex and its **0° line** along one arm of the angle. Read where the other arm crosses the scale. Use the scale that runs from your 0° line — choose the inner or outer scale carefully.



→ If the 0° line runs left-to-right and the arm goes up-right, read from the **inner scale** (0° at the right).

→ If the angle looks **acute** (< 90°), your reading should be **less than 90°** — double-check the scale.

READING A 60° ANGLE ON THE PROTRACTOR



1. Line up the **centre cross** of the protractor on the **vertex** of the angle.
2. Set the **0° baseline** along one of the angle's arms.
3. Read the scale that **starts at 0** on that arm — follow it round to where the second arm crosses the scale. Here it crosses at **60°**.

HOW TO ANSWER TODAY

- **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° → use the outer scale to read the second arm

WARM-UP

1. Cian is measuring an angle on the giant chess board painted on the school yard using a protractor. One scale on his protractor reads **48°** and the other scale reads **132°**. The angle clearly looks acute. Which reading is correct?

   > On a protractor, one scale reads 48° and the other scale reads 132°. Which reading is correct if the angle looks acute?

2. Saoirse is measuring an angle on a Seachtain na Gaeilge banner she is pinning to the class door. The protractor's two scales show **121°** and **59°** where the banner's corner sits. The angle clearly looks obtuse, so which reading is correct?

   > On a protractor, one scale reads 121° and the other scale reads 59°. Which reading is correct if the angle looks obtuse?

PRACTICE

1. 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?

2. Saoirse is building a kite in the after-school crafts club and measures one of its corner angles with a protractor. The angle looks obtuse, and the protractor shows **136°** on one scale and **44°** on the other scale. Which reading is the correct one for her kite's corner?

   > On a protractor, one scale reads 136° and the other scale reads 44°. Which reading is correct if the angle looks obtuse?