Lesson 77

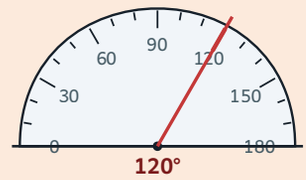
Drawing angles with a protractor

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

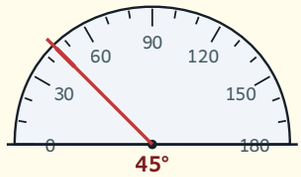
To draw a given angle: draw the **base line** first, mark the **vertex**, place the protractor's centre on the vertex with the 0° line along the base, then **mark a dot** at the required degree and join from the vertex.

→ **Drawing 60°**: count 60° from the 0° line, mark a dot, join from the vertex through the dot.

→ **Drawing 135°** (obtuse): count past 90° to 135°; the line slopes back over the vertex.



DRAWING A 45° ANGLE



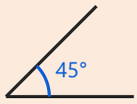
1. Draw a straight base line and mark a **vertex point** on it.
2. Place the protractor so its centre cross is on the vertex and the 0° line runs along the base line.
3. Find **45°** on the scale that starts at 0° and make a small mark.
4. Lift the protractor and join the vertex to the mark with a ruler — that's your **45° angle**.

HOW TO ANSWER TODAY

- **Classify an angle.** Acute < 90° · right = 90° · obtuse 90°–180° · straight = 180° · reflex > 180°.
  75° → acute · 120° → obtuse · 220° → reflex

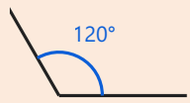
WARM-UP

1



For Engineers Week, 5th class are cutting timber brackets in the woodwork room. Tadhg marks an angle of **45°** on his bracket before cutting. Is this angle acute, right, obtuse, straight or reflex?

2



Oisín is making a junk-modelling rocket from cereal boxes for his 5th class art project. He folds a flap so that it opens at an angle of **120°** from the side of the box. Is this angle acute, right, obtuse, straight or reflex?