Solutions

Award method and answer marks as indicated; accept equivalent correct methods.

2.1

- **Line 6.4 cm; angle** 65°, allowing normal drawing accuracy. Align the protractor centre and baseline.

2.2

- **Base 6 cm; arcs of radii 4 and 3 cm from its endpoints; join the intersection to both ends**.

2.3

- **Six 2 cm squares in a valid net**, for example four in a row with one above and one below the second square.

2.4

- $S = 2(12 + 8 + 6) = \mathbf{52}$ cm^2.

3.1

(a)

- **Base AB 8 cm; equal 5 cm arcs from A and B; join the crossing C**.

(b)

- The base angle is about 37° (accept 35° to 39° for a drawing).

(c)

- **Two triangles with sides 8, 5, 5 cm; one** 8×10 **cm rectangle; two** 5×10 **cm rectangles**.

3.2

(a)

- Draw a **5 cm base** accurately.
- Draw arcs of **3 cm and 4 cm** centred at its endpoints.
- Join their intersection to the endpoints and retain the construction arcs.

(b)

- Use two 3–4–5 triangles and rectangles $\mathbf{3 \times 7}$, $\mathbf{4 \times 7}$, $\mathbf{5 \times 7}$ **cm**.
- Area $S = 2(3 \times 4/2) + 7(3 + 4 + 5)$, so $S = \mathbf{96}$ cm^2.

3.3

- Draw $PQ = 7$ cm; with compasses at P draw an arc of radius 4 cm, and at Q an arc of radius 6 cm.
- R is where the arcs cross; join PR and QR, sides accurate to ± 2 mm with both arcs shown.