## Solutions

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

**2.1**

- Compare with 90 and 180 degrees: **acute, obtuse, reflex**, respectively.

**2.2**

- Two equal sides make it **isosceles**. The quadrilateral is a **rhombus**.

**2.3**

- Six square faces meet along **12 edges**; there are **6 faces**.

**2.4**

- The region is a **sector**; the touching line is a **tangent**.

**3.1**

(a)

- $d = 2r = 2(7) =$ **14** cm; the line segment is a **diameter**.

(b)

- A **segment** has a chord boundary; a **sector** has two radius boundaries.

(c)

- Both lengths double, so **similar with scale factor 2**, but **not congruent** because their sizes differ.

**3.2**

(a)

- A is a **parallelogram**.
- Its opposite sides are **equal in length** and its opposite angles are **equal**.
- No given information guarantees a rhombus.

(b)

- B has **5 faces and 9 edges**, and **6 vertices**.
- It has two congruent parallel triangular ends with a constant cross-section, unlike a pyramid with one base and an apex.

**3.3**

- Acute is less than 90°, obtuse is between 90° and 180°, reflex is between 180° and 360°.
- 97° **obtuse**, 210° **reflex**, 34° **acute**, 90° a **right angle**.

**3.4**

(a)

- **6** faces and **12** edges.
- **8** vertices.

(b)

- There are 4 edges of each length: $4 \times (5 + 3 + 2) =$ **40** cm.