

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)

- $d = 2r = 2(7) = \mathbf{14}$ 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.