

Solutions

Marking: **M1** a correct method, **A1** the correct answer.

Each answer shows the steps, then the **result**.

2.1

- a regular n -gon has n of each

6 lines, **order 6**

2.2

- turning it through 180° gives the same shape, and a full turn gives it twice

order 2

2.3

- the fold line runs through the midpoints of the two parallel sides

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3.1

(a)

- the fold lines join the midpoints of opposite sides; the diagonals are NOT lines of symmetry

2 lines, **order 2**

(b)

- regular, so both equal the number of sides

5 lines, **order 5**

3.2

(a)

- the perpendicular from the centre of a circle to a chord **bisects the chord**

(b)

- half the chord is $16 \div 2 = 8$ cm
- the radius, the half-chord and the distance form a right-angled triangle, so $d = \sqrt{10^2 - 8^2}$

$$= \sqrt{36} = \mathbf{6} \text{ cm}$$

- the radius is the HYPOTENUSE, so it is subtracted from, not added to