Angle reasoning consolidation

6 questions | 13 marks

Equivalent correct methods earn the corresponding marks.

1. Two adjacent angles form a straight line. One is 136°. Find the other. [2 marks]

Adjacent angles on a line total 180°.

$180° - 136° = 44°$.

Answer: 44°

2. Angles around a point are 85°, 140° and x. Find x. [2 marks]

Angles around a point total 360°.

$360° - 85° - 140° = 135°$.

Answer: 135°

3. A triangle has angles 72° and 49°. Find its third angle. [2 marks]

Triangle sum is 180°.

$180° - 72° - 49° = 59°$.

Answer: 59°

4. Two parallel lines are crossed by a transversal. An angle at the first crossing is 71°. Find its corresponding angle at the second crossing. [2 marks]

Corresponding angles in parallel lines are equal.

Answer: 71°

5. A quadrilateral has angles 88°, 97°, 104° and x. Find x. [2 marks]

Its interior angles total 360°.

$360° - 88° - 97° - 104° = 71°$.

Answer: 71°

6. Find one interior angle of a regular hexagon. Explain why division by 6 is valid. [3 marks]

The angle sum is $(6-2) \times 180° = 720°$.

Regular means all six angles are equal.

$720° \div 6 = 120°$.

Answer: 120°