

Angles and Polygons

ANSWERS

Calculator | 30 minutes | Total marks: 25

Name

Class

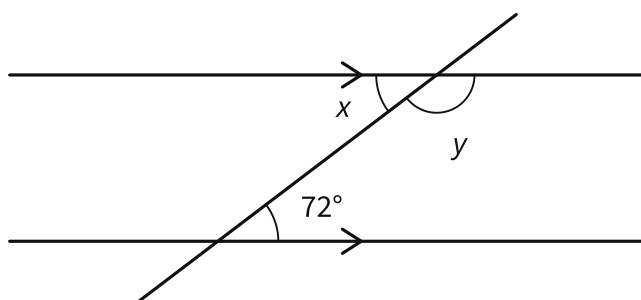
- 1 Three angles of a quadrilateral are 85° , 110° and 95° .

Work out the size of the fourth angle.

$$360 - 85 - 110 - 95 \text{ (1)}$$

Answer 70 (1) ° [2 marks]

- 2 The diagram shows two parallel lines crossed by a straight line.



Not drawn accurately

- (a) Write down the size of angle x .
Give a reason for your answer.

$$x = \underline{72 \text{ (1)}}^\circ$$

Alternate angles are equal (1)

[2 marks]

- (b) Work out the size of angle y .
Give a reason for your answer.

$$y = \underline{108 \text{ (1)}}^\circ$$

Co-interior angles add up to 180° (1)

[2 marks]

3

(a) Write down the name of a polygon with 6 sides.

Answer hexagon (1)

[1 mark]

(b) How many sides does an octagon have?

Answer 8 (1)

[1 mark]

4

(a) Work out the sum of the interior angles of a pentagon.

$$3 \times 180 (1)$$

Answer 540 (1)

°

[2 marks]

(b) Work out the size of each interior angle of a regular octagon.

$$360 \div 8 = 45 (1)$$

Answer 135 (1)

°

[2 marks]

(c) Work out the size of each exterior angle of a regular decagon (10 sides).

Answer 36 (1)

°

[1 mark]

(d) Each exterior angle of a regular polygon is 30°.

Work out the number of sides.

$$360 \div 30 (1)$$

Answer 12 (1)

[2 marks]

5

Four angles of a pentagon are 100°, 120°, 95° and 130°.

Work out the size of the fifth angle.

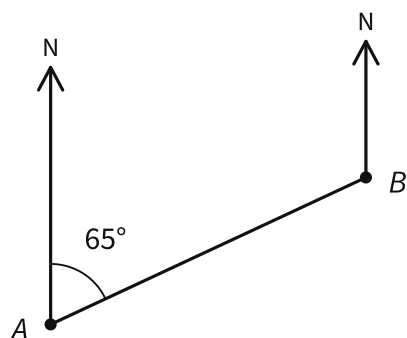
$$540 - 445 (1)$$

Answer 95 (1)

°

[2 marks]

- 6 The diagram shows the positions of two boats, A and B.



Not drawn accurately

- (a) Write down the bearing of B from A.

Answer 065 (1) ° [1 mark]

- (b) Work out the bearing of A from B.

$65 + 180$ (1)

Answer 245 (1) ° [2 marks]

- 7 (a) On a map, 1 cm represents 2 km.

Two villages are 7.5 cm apart on the map.

Work out the actual distance between the villages.

Answer 15 (1) km [1 mark]

- (b) A different map has a scale of 1 : 50 000

A road is 4 cm long on this map.

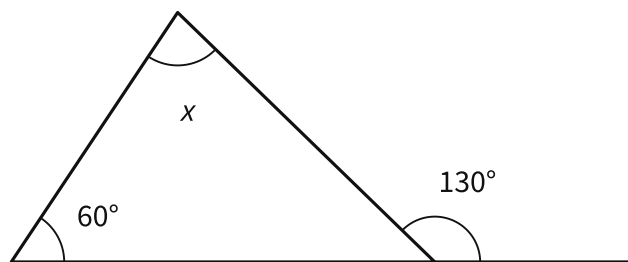
Work out the actual length of the road in kilometres.

$4 \times 50\,000 = 200\,000\text{ cm}$ (1)

Answer 2 (1) km [2 marks]

8

One side of the triangle has been extended.



Not drawn accurately

Work out the size of angle x .

$$130 - 60 \text{ (1)}$$

$$x = \underline{70 \text{ (1)}}^\circ \text{ [2 marks]}$$

Question	Topic	RAG
1	I can find a missing angle in a quadrilateral	
2	I can use angles in parallel lines and give reasons	
3	I know the names of polygons	
4	I can use interior and exterior angles of polygons	
5	I can find a missing angle in a polygon	
6	I can work with bearings	
7	I can use a map scale	
8	I can use the exterior angle of a triangle	