

Perimeter and Area

ANSWERS

Calculator | 30 minutes | Total marks: 29

Name Class

1 The diagram shows a circle and three lines.

Write one word from the box next to each letter.

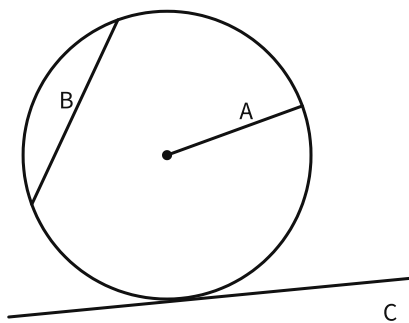
arc

chord

radius

sector

tangent



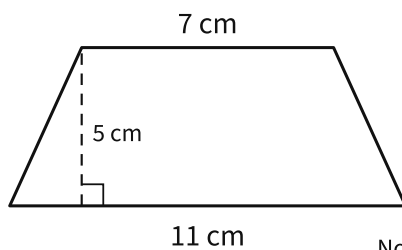
A radius (1)

B chord (1)

C tangent (1)

[3 marks]

2



Not drawn accurately

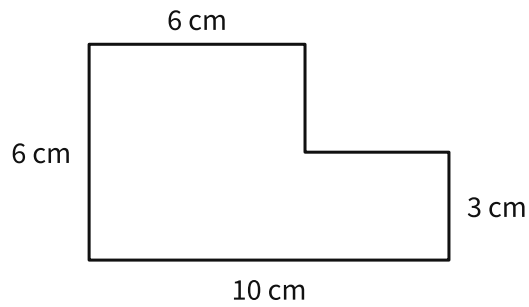
Work out the area of the trapezium.

$$\frac{1}{2} \times (7 + 11) \times 5 \text{ (1)}$$

Answer 45 (1) cm² [2 marks]

3

All the corners of this shape are right angles.



Not drawn accurately

(a) Work out the area of the shape.

$$10 \times 3 = 30 \text{ and } 6 \times 3 = 18 \text{ (1)(1)}$$

Answer 48 (1) cm² [3 marks]

(b) Work out the perimeter of the shape.

$$10 + 3 + 4 + 3 + 6 + 6 \text{ (1)}$$

Answer 32 (1) cm [2 marks]

4

A circle has a radius of 6 cm.

(a) Work out the circumference of the circle.

Give your answer to 1 decimal place.

$$\pi \times 12 \text{ (1)}$$

Answer 37.7 (1) cm [2 marks]

(b) Work out the area of the circle.

Give your answer to 1 decimal place.

$$\pi \times 6^2 \text{ (1)}$$

Answer 113.1 (1) cm² [2 marks]

5

A circle has a diameter of 10 cm.

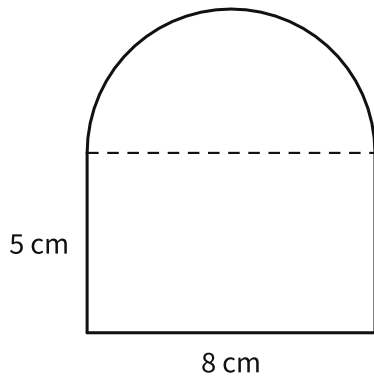
Work out the area of the circle.

Give your answer in terms of π .

$$\text{radius} = 5 \text{ (1)}$$

Answer 25π (1) cm² [2 marks]

- 6 The shape is made from a rectangle and a semicircle.



Not drawn accurately

Work out the area of the shape.

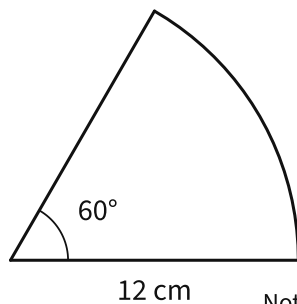
Give your answer to 1 decimal place.

$$\text{rectangle } 8 \times 5 = 40 \text{ (1)}$$

$$\text{semicircle } \frac{1}{2} \times \pi \times 4^2 = 25.13... \text{ (1)}$$

Answer 65.1 (1) cm² [3 marks]

- 7 The diagram shows a sector of a circle.



Not drawn accurately

- (a) Work out the length of the arc.

Give your answer to 1 decimal place.

$$\frac{60}{360} \times \pi \times 24 \text{ (1)}$$

Answer 12.6 (1) cm [2 marks]

- (b) Work out the area of the sector.

Give your answer to 1 decimal place.

$$\frac{60}{360} \times \pi \times 12^2 \text{ (1)}$$

Answer 75.4 (1) cm² [2 marks]

- 8 (a) A triangle has an area of 30 cm² and a base of 12 cm.

Work out its height.

$$\frac{1}{2} \times 12 \times h = 30 \text{ (1)}$$

Answer 5 (1) cm [2 marks]

- (b) A parallelogram has a base of 8 cm and a perpendicular height of 3.5 cm.

Work out its area.

Answer 28 (1) cm² [1 mark]

9

A circular pond has a diameter of 4 m.

A fence is put around the edge of the pond. Fencing is sold in whole metres at £7 per metre.

Work out the cost of the fencing.

$$\pi \times 4 = 12.56... \text{ (1)}$$

13 metres needed (1)

Answer £ 91 (1)

[3 marks]

Question	Topic	RAG
1	I know the parts of a circle	
2	I can find the area of a trapezium	
3	I can find the area and perimeter of a compound shape	
4	I can find the circumference and area of a circle	
5	I can give an answer in terms of π	
6	I can find the area of a shape with a semicircle	
7	I can find an arc length and the area of a sector	
8	I can work backwards from an area	
9	I can solve a problem using circumference	