

Perimeter and Area

ANSWERS

Calculator | 30 minutes | Total marks: 28

Name Class

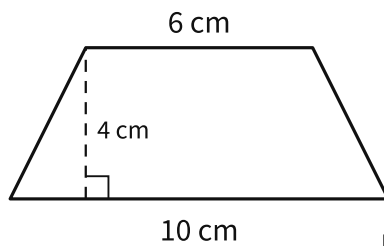
- 1 (a) Write down the name of a quadrilateral with exactly one pair of parallel sides.

Answer trapezium (1) [1 mark]

- (b) Write down the name of a triangle with three sides of different lengths.

Answer scalene (1) [1 mark]

2



Not drawn accurately

Work out the area of the trapezium.

$$\frac{1}{2} \times (6 + 10) \times 4 \text{ (1)}$$

Answer 32 (1) cm² [2 marks]

3

- (a) A circle has a radius of 7 cm.

Work out the circumference of the circle.

Give your answer in terms of π .

Answer 14π (1) cm [1 mark]

- (b) Work out the area of the same circle.

Give your answer in terms of π .

Answer 49π (1) cm² [1 mark]

- (c) A different circle has a diameter of 12 cm.

Work out its area.

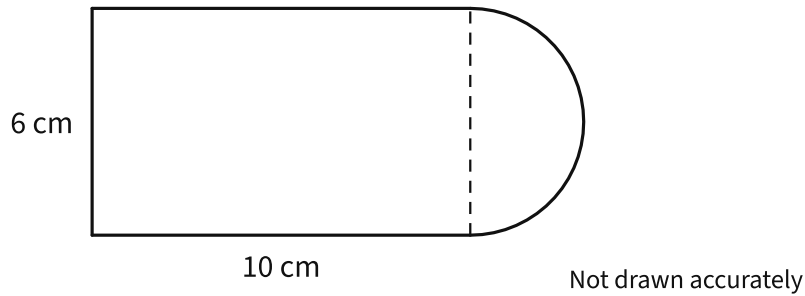
Give your answer to 1 decimal place.

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

Answer 113.1 (1) cm² [2 marks]

4

The shape is made from a rectangle and a semicircle.



- (a) Work out the perimeter of the shape.

Give your answer to 1 decimal place.

$$\text{curved edge} = \frac{1}{2} \times \pi \times 6 = 9.42... \text{ (1)}$$

$$10 + 6 + 10 + 9.42... \text{ (1)}$$

Answer 35.4 (1) cm [3 marks]

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

Give your answer to 1 decimal place.

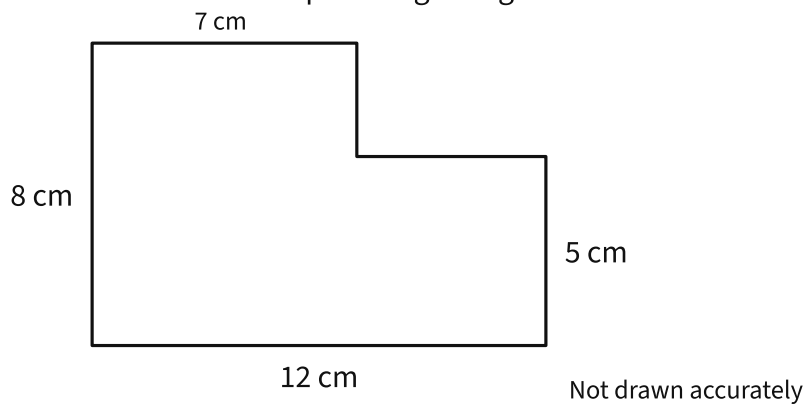
$$\text{rectangle } 60 \text{ (1)}$$

$$\text{semicircle } \frac{1}{2} \times \pi \times 3^2 = 14.13... \text{ (1)}$$

Answer 74.1 (1) cm² [3 marks]

5

All the corners of this shape are right angles.



(a) Work out the area of the shape.

$$12 \times 5 = 60 \text{ and } 7 \times 3 = 21 \text{ (1)(1)}$$

Answer 81 (1) cm² [3 marks]

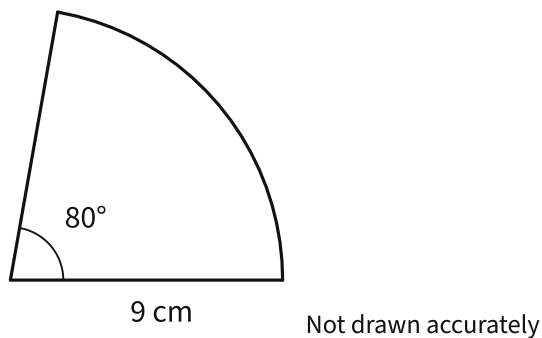
(b) Work out the perimeter of the shape.

$$12 + 5 + 5 + 3 + 7 + 8 \text{ (1)}$$

Answer 40 (1) cm [2 marks]

6

The diagram shows a sector of a circle.



(a) Work out the length of the arc.

Give your answer to 1 decimal place.

$$\frac{80}{360} \times \pi \times 18 \text{ (1)}$$

Answer 12.6 (1) cm [2 marks]

(b) Work out the area of the sector.

Give your answer to 1 decimal place.

$$\frac{80}{360} \times \pi \times 9^2 \text{ (1)}$$

Answer 56.5 (1) cm² [2 marks]

7

- (a) A rectangle has an area of 54 cm^2 and a length of 9 cm.

Work out its perimeter.

$$\text{width} = 54 \div 9 = 6 \text{ (1)}$$

Answer 30 (1) cm [2 marks]

- (b) A triangle has an area of 24 cm^2 and a base of 8 cm.

Work out its height.

$$\frac{1}{2} \times 8 \times h = 24 \text{ (1)}$$

Answer 6 (1) cm [2 marks]

8

- The circumference of a circle is $20\pi \text{ cm}$.

Write down the radius of the circle.

Answer 10 (1) cm [1 mark]

Question	Topic	RAG
1	I can classify triangles and quadrilaterals	
2	I can find the area of a trapezium	
3	I can calculate with circles, including in terms of π	
4	I can find the perimeter and area of a shape with a semicircle	
5	I can find the area and perimeter of a compound shape	
6	I can find an arc length and the area of a sector	
7	I can work backwards from an area	
8	I can find a radius from a circumference	