

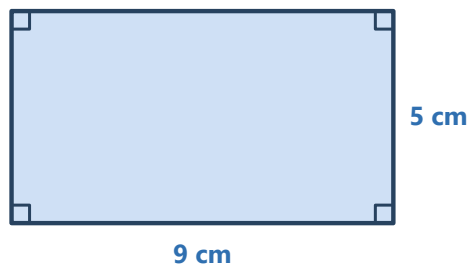
## GCSE Maths Perimeter, Area and Circles (Foundation): check-up and exam-style questions: answers

GCSE Maths - Perimeter, Area and Circles - Foundation - Test yourself

**Answers.** Final answers to the worksheet questions. Full step-by-step solutions for every question are free at [websink.site/gcse/maths/ch18-perimeter-area-circles/foundation/check-up-and-exam-style-questions/](https://websink.site/gcse/maths/ch18-perimeter-area-circles/foundation/check-up-and-exam-style-questions/)

### Exercise 18Z Check-up (non-calculator) Non-calculator

- 1 Work out (a) the area and (b) the perimeter of the rectangle.



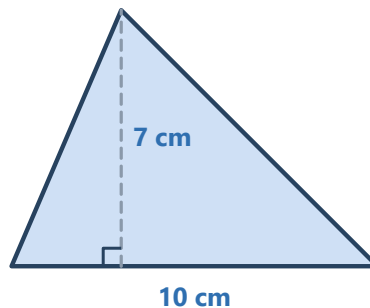
- (a) area

**Answer:**  $45 \text{ cm}^2$

- (b) perimeter

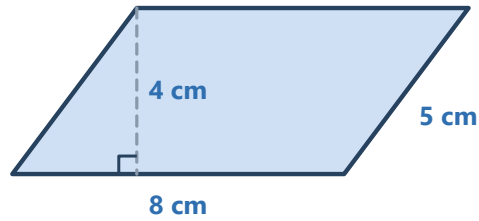
**Answer:** 28 cm

- 2 Work out the area of the triangle.



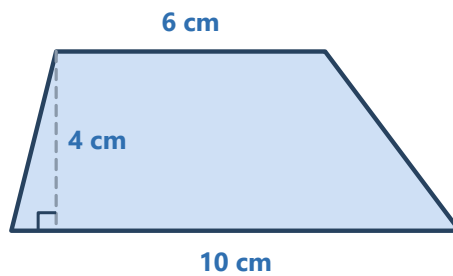
**Answer:**  $35 \text{ cm}^2$

- 3 Work out the area of the parallelogram.



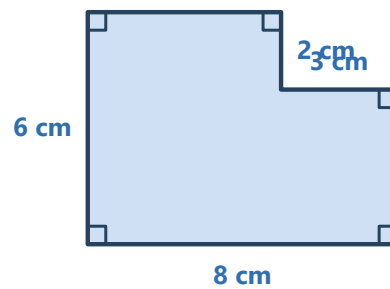
**Answer:**  $32 \text{ cm}^2$

- 4 Work out the area of the trapezium.



**Answer:**  $32 \text{ cm}^2$

- 5 Work out the area of the L-shape.

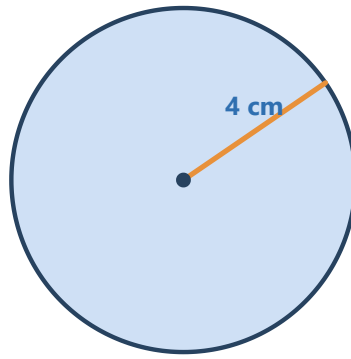


**Answer:**  $42 \text{ cm}^2$

- 6 Change  $2.5 \text{ m}^2$  into  $\text{cm}^2$ .

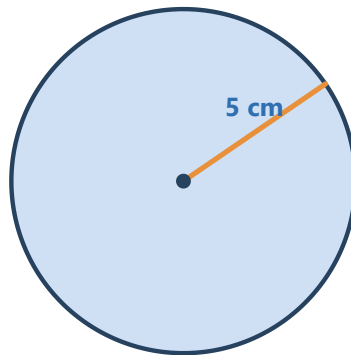
**Answer:**  $25,000 \text{ cm}^2$

- 7 Work out the circumference of the circle. Give your answer in terms of  $\pi$ .



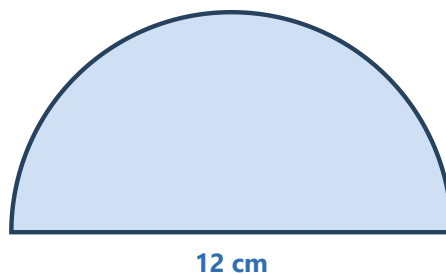
**Answer:**  $8\pi$  cm

- 8 Work out the area of the circle. Give your answer in terms of  $\pi$ .



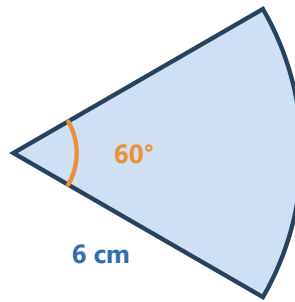
**Answer:**  $25\pi$  cm<sup>2</sup>

- 9 Work out the perimeter of the semicircle. Give your answer in terms of  $\pi$ .



**Answer:**  $(12 + 6\pi)$  cm

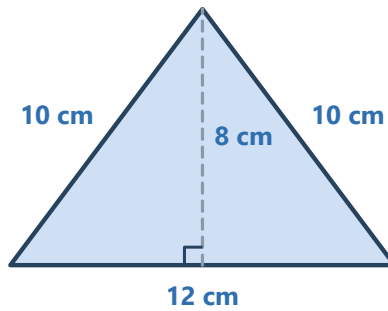
- 10 Work out the area of the sector. Give your answer in terms of  $\pi$ .



**Answer:**  $6\pi \text{ cm}^2$

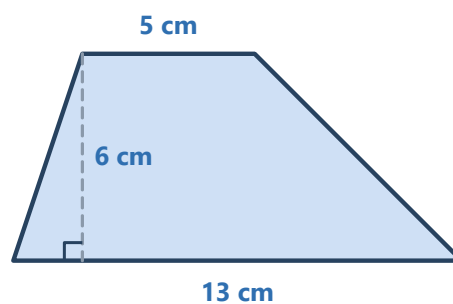
### Exercise 18X Exam-style questions Non-calculator

- 1** The diagram shows a triangle. Work out the area of the triangle. [2 marks]



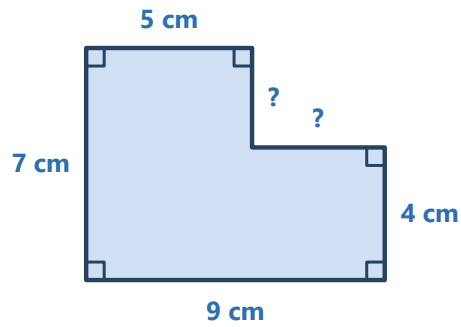
**Answer:**  $48 \text{ cm}^2$

- 2** Work out the area of the trapezium. [3 marks]



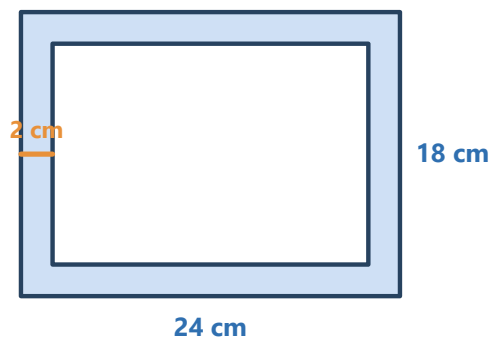
**Answer:**  $54 \text{ cm}^2$

- 3** Work out the perimeter of this shape. [3 marks]



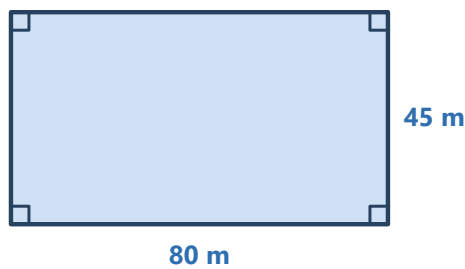
**Answer:** 32 cm

- 4 A rectangular photo is 20 cm by 14 cm. It is put in a frame with a border 2 cm wide all the way round. Work out the area of the border. [3 marks]



**Answer:** 152 cm<sup>2</sup>

- 5 A farmer is fencing a rectangular field 80 m by 45 m all the way round. Fencing costs £5.50 per metre. Work out the total cost of the fencing. [3 marks]



**Answer:** £1375

- 6 A wall is 7 m wide and 3 m high. It needs two coats of paint. One litre of paint covers 6 m<sup>2</sup>. Paint is sold in 2.5 litre tins at £16.80 each. Work out the cost of the paint. [4 marks]



**Answer:** £50.40

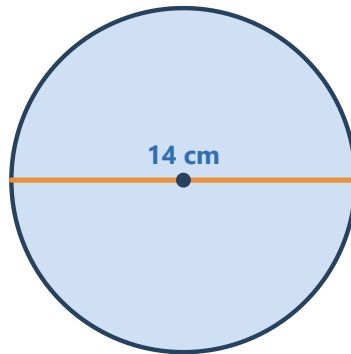
- 7** Change  $0.35 \text{ m}^2$  into  $\text{cm}^2$ .

[2 marks]

**Answer:**  $3500 \text{ cm}^2$

- 8** The diameter of a circle is 14 cm. Work out the circumference. Give your answer in terms of  $\pi$ .

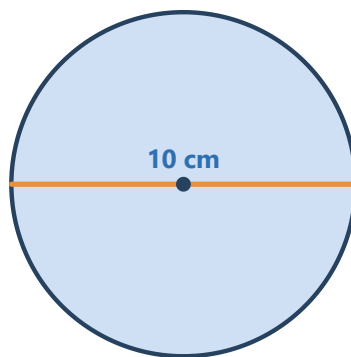
[2 marks]



**Answer:**  $14\pi \text{ cm}$

- 9** Work out the area of the circle. Give your answer to 1 decimal place.

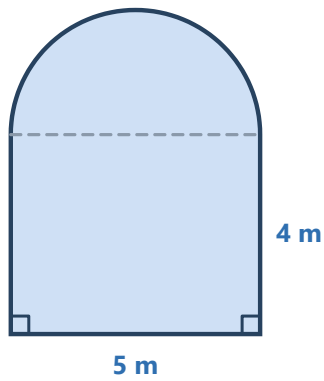
[3 marks]



**Answer:**  $78.5 \text{ cm}^2$

- 10** The diagram shows a window made from a rectangle and a semicircle. Work out (a) the area and (b) the perimeter of the window. Give both answers to 1 decimal place.

[5 marks]



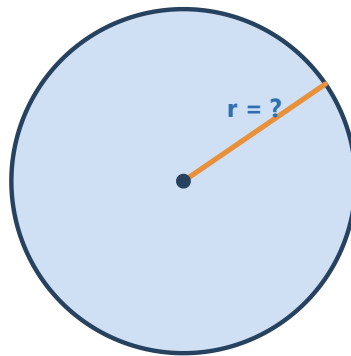
(a) area (2 marks)

**Answer:** 29.8 m<sup>2</sup>

(b) perimeter (3 marks)

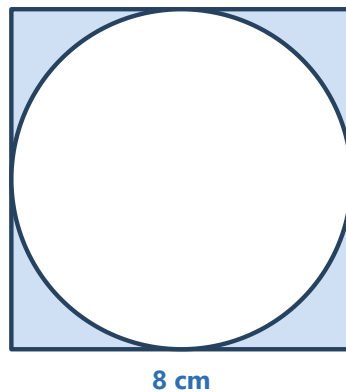
**Answer:** 20.9 m

**11** The circumference of a circle is 40 cm. Work out the radius. Give your answer to 1 decimal place. [3 marks]



**Answer:** 6.4 cm

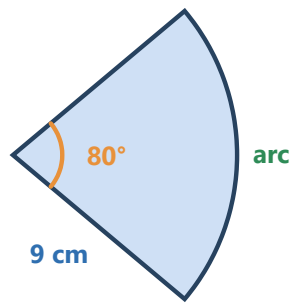
**12** A circle just touches all four sides of a square of side 8 cm. Work out the area of the shaded corners. Give your answer in terms of  $\pi$ . [4 marks]



**Answer:**  $(64 - 16\pi)$  cm<sup>2</sup>

**13** The diagram shows a sector of a circle with radius 9 cm. Work out the arc length of the sector. Give your answer to 1 decimal place.

[3 marks]



**Answer:** 12.6 cm

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