

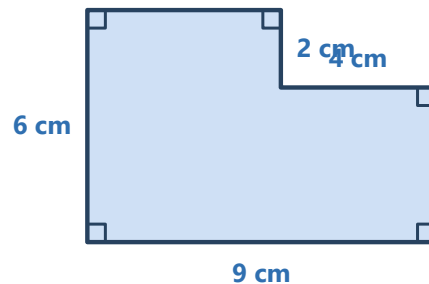
## GCSE Maths: Compound shapes (Higher): answers

GCSE Maths - Perimeter, Area and Circles - Higher - Lesson 18.4

**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/higher/compound-shapes/](https://websink.site/gcse/maths/ch18-perimeter-area-circles/higher/compound-shapes/)

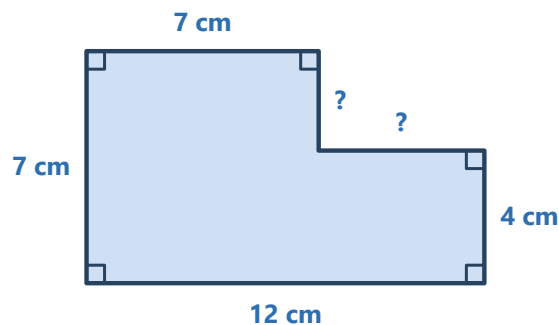
### Exercise 18D Compound shapes Non-calculator

- 1 Work out the area of this shape. Show how you split it up.



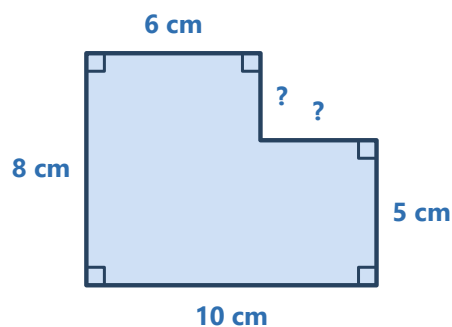
**Answer:** 46 cm<sup>2</sup>

- 2 Work out the perimeter of this shape.



**Answer:** 38 cm

- 3 Work out (a) the area and (b) the perimeter of this shape.



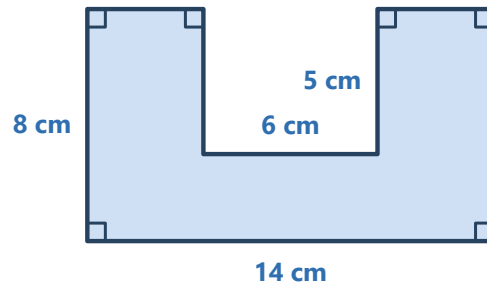
(a) area

**Answer:**  $68 \text{ cm}^2$

(b) perimeter

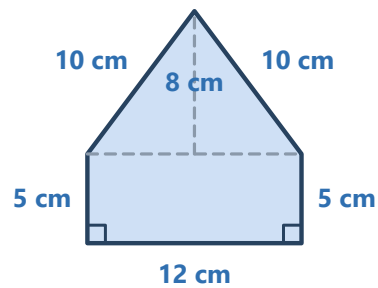
**Answer:**  $36 \text{ cm}$

4 Work out the area of this shape.



**Answer:**  $82 \text{ cm}^2$

5 The shape is made from a rectangle and a triangle. Work out (a) its area and (b) its perimeter.



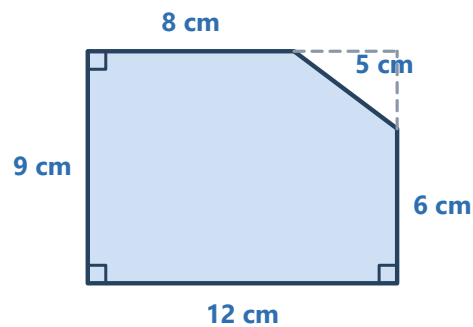
(a) area

**Answer:**  $108 \text{ cm}^2$

(b) perimeter

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

6 A rectangle 12 cm by 9 cm has a corner cut off to make this shape. Work out (a) the area and (b) the perimeter of the shape.



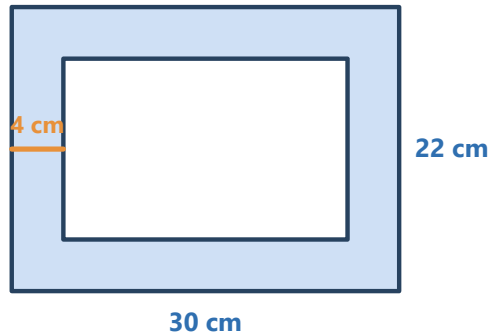
(a) area

**Answer:** 102 cm<sup>2</sup>

(b) perimeter

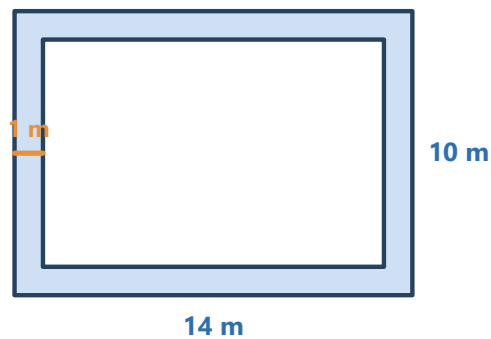
**Answer:** 40 cm

- 7 A photo frame is 30 cm by 22 cm. The wooden border is 4 cm wide all the way round. Work out the area of the wooden border.



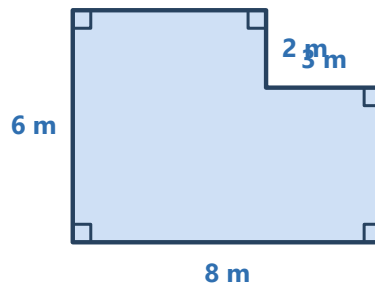
**Answer:** 352 cm<sup>2</sup>

- 8 A rectangular lawn is 12 m by 8 m. A path 1 m wide goes all the way round the outside of the lawn. Work out the area of the path.



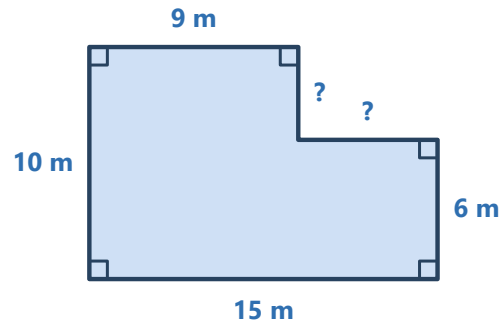
**Answer:** 44 m<sup>2</sup>

- 9 The floor of a room is this L-shape. Flooring costs £22 per square metre. Work out the cost of covering the whole floor.



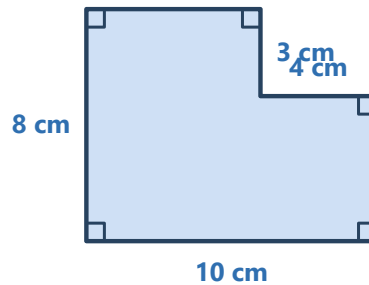
**Answer:** £924

- 10** Fencing is to go all the way round this L-shaped garden. Fencing costs £12 per metre. Work out the total cost.



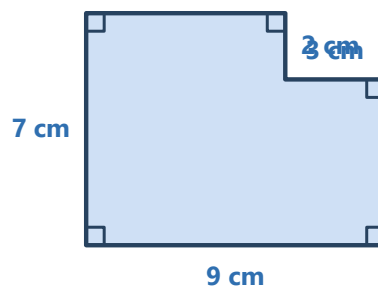
**Answer:** £600

- 11** Leo works out the area of this L-shape. He writes: " $10 \times 8 + 4 \times 3 = 92 \text{ cm}^2$ ". Explain his mistake and work out the correct area.



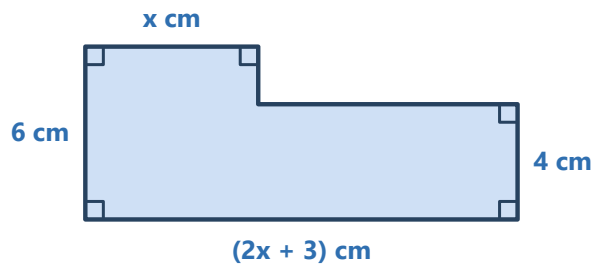
**Answer:** He added the missing corner; area =  $68 \text{ cm}^2$

- 12** Show that the area of this shape is  $57 \text{ cm}^2$  by splitting it into two rectangles.



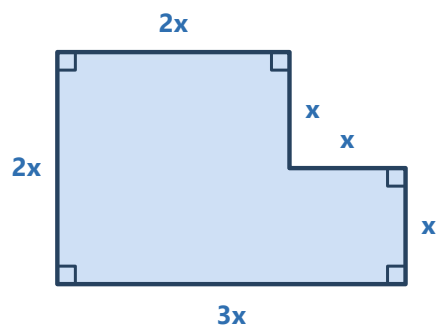
**Answer:** Area =  $57 \text{ cm}^2$

- 13** An L-shape is made from two rectangles. Rectangle A is  $x \text{ cm}$  by  $6 \text{ cm}$  and rectangle B is  $(x + 3) \text{ cm}$  by  $4 \text{ cm}$ . The total area is  $72 \text{ cm}^2$ . Work out  $x$ .



**Answer:**  $x = 6$

- 14** This L-shape is a  $3x$  cm by  $2x$  cm rectangle with an  $x$  cm by  $x$  cm square removed from a corner. (a) Show that the perimeter is  $10x$  cm. (b) The perimeter is  $50$  cm. Find the area of the shape.



- (a)** (a) show that

**Answer:** Perimeter =  $10x$

- (b)** (b) area

**Answer:**  $125 \text{ cm}^2$