

GCSE Maths: Units of area and area in context (Higher): worksheet

GCSE Maths - Perimeter, Area and Circles - Higher - Lesson 18.5

Name: _____

Date: _____

Score: _____

14 questions. Write your answers in the spaces. Answers and step-by-step help are free at websink.site/gcse/maths/ch18-perimeter-area-circles/higher/units-of-area-and-area-in-context/

Exercise 18E Units of area and area in context Calculator allowed

1 Change each area into the unit shown.

(a) 3 m^2 into cm^2

Answer:

(b) 0.5 m^2 into cm^2

Answer:

(c) 7 cm^2 into mm^2

Answer:

(d) 8 km^2 into m^2

Answer:

2 Change each area into the unit shown.

(a) $45\,000 \text{ cm}^2$ into m^2

Answer:

(b) $250\,000 \text{ cm}^2$ into m^2

Answer:

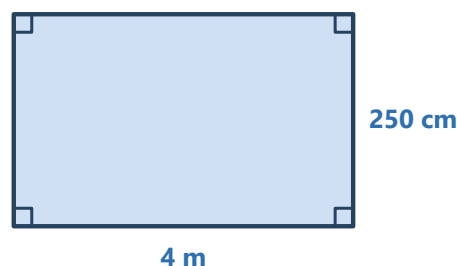
(c) 600 mm^2 into cm^2

Answer:

(d) $3\,500\,000 \text{ m}^2$ into km^2

Answer:

3 A rectangle is 4 m long and 250 cm wide. Work out its area in m^2 .



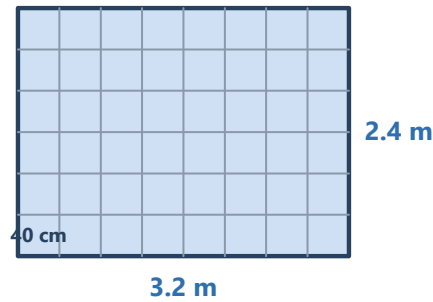
Answer:

4 A rectangular table top is 1.5 m long and 60 cm wide. Work out its area in cm^2 .



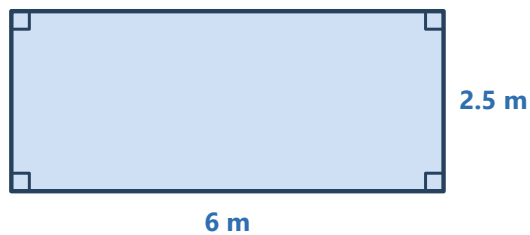
Answer:

- 5** A floor is 3.2 m by 2.4 m. Square tiles of side 40 cm cost £2.75 each. Work out the cost of tiling the floor.



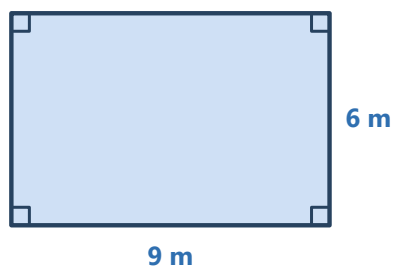
Answer:

- 6** A wall is 6 m wide and 2.5 m high. One litre of paint covers 10 m^2 . The wall needs two coats. Paint is sold in 2 litre tins at £14.40 each. Work out the cost of the paint.



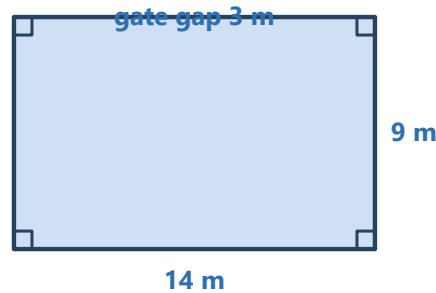
Answer:

- 7** A lawn is 9 m by 6 m. Turf is sold in rolls that each cover 1.5 m^2 . A roll costs £3.20. Work out the total cost of the turf.



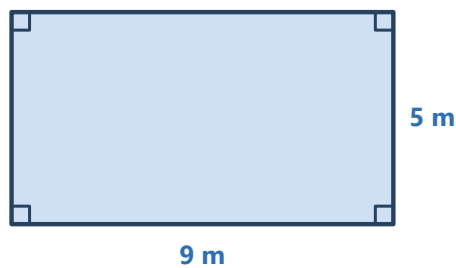
Answer:

- 8** A rectangular garden is 14 m by 9 m. A fence goes all the way round except for a 3 m gap for a gate. Fencing costs £18 per metre. Work out the cost of the fencing.



Answer:

- 9** Tin A holds 2.5 litres of paint, covers 30 m^2 and costs £19. Tin B holds 5 litres, covers 60 m^2 and costs £34. A wall is 9 m by 5 m (one coat). Which choice of tins is cheaper, and by how much?



Answer:

- 10** Write each area in the unit shown.

(a) $3.6 \times 10^6 \text{ mm}^2$ in m^2

Answer:

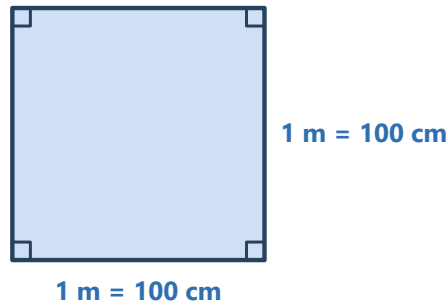
(b) $2.5 \times 10^{-3} \text{ km}^2$ in m^2

Answer:

- 11** A field has an area of 0.045 km^2 . A farmer wants to sell it in plots of 450 m^2 . How many whole plots can she make, and how much of the field is left over (in m^2)?

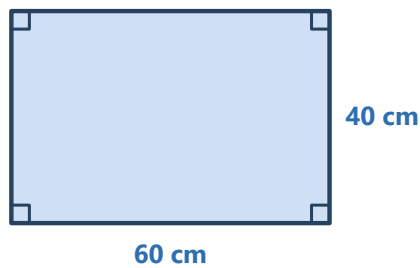
Answer:

- 12** Ben says: “ 1 m^2 is 100 cm^2 , because 1 m is 100 cm.” Use a square of side 1 m to show that Ben is wrong.



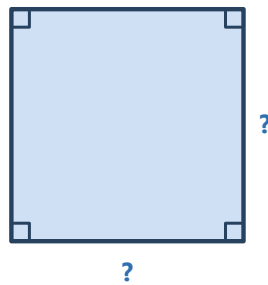
Answer:

- 13** Mia says a 60 cm by 40 cm rectangle has an area of 0.24 m^2 . Is she correct? Show how you know.



Answer:

- 14** A square has an area of 2.25 m^2 . Show that its perimeter is 600 cm.



Answer: