

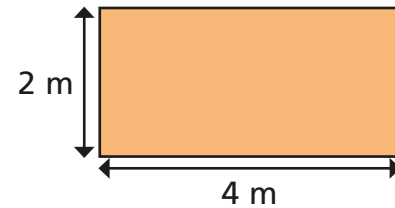
# Convert metric units of area

H

1

a) Work out the area of the rectangle in  $\text{m}^2$

area =   $\text{m}^2$



b) Convert the lengths of the sides to cm.

length =  cm      width =  cm

c) Now work out the area of the rectangle in  $\text{cm}^2$

area =   $\text{cm}^2$

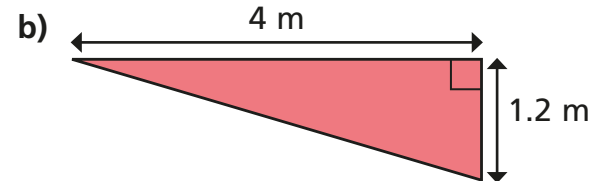
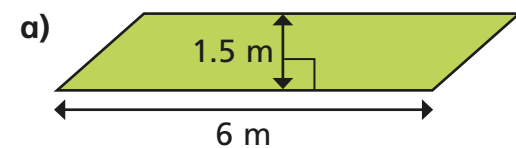
d) Use your workings to complete the sentences.

$\text{m}^2$  =   $\text{cm}^2$

So 1  $\text{m}^2$  =   $\text{cm}^2$

2

Work out the areas of the shapes. Give your answers in both  $\text{m}^2$  and  $\text{cm}^2$



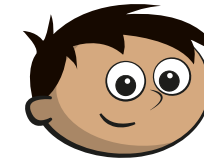
area =   $\text{m}^2$

area =   $\text{cm}^2$

area =   $\text{m}^2$

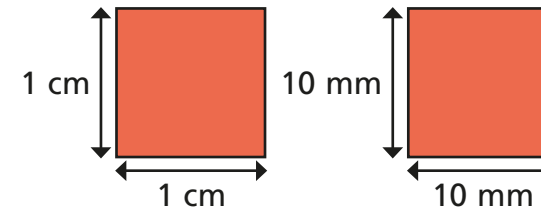
area =   $\text{cm}^2$

3



1 cm = 10 mm, so 1  $\text{cm}^2$  = 10  $\text{mm}^2$

Use the diagrams to explain why Amir is wrong.




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4

Complete the conversions.

a) 1  $\text{cm}^2$  =   $\text{mm}^2$

6  $\text{cm}^2$  =   $\text{mm}^2$

b) 3  $\text{cm}^2$  =   $\text{mm}^2$

30  $\text{cm}^2$  =   $\text{mm}^2$

c) 0.3  $\text{cm}^2$  =   $\text{mm}^2$

0.35  $\text{cm}^2$  =   $\text{mm}^2$

d) 600  $\text{mm}^2$  =   $\text{cm}^2$

720  $\text{mm}^2$  =   $\text{cm}^2$

e) 500  $\text{mm}^2$  =   $\text{cm}^2$

5,000  $\text{mm}^2$  =   $\text{cm}^2$

f) 50  $\text{mm}^2$  =   $\text{cm}^2$

5  $\text{mm}^2$  =   $\text{cm}^2$

5

Dora says you can cut out 36 squares that are 5 mm by 5 mm from a piece of card measuring 3 cm by 3 cm.

a) Is Dora correct? \_\_\_\_\_

Show your workings.

b) How many 5 mm by 5 mm squares can be cut from a piece of card measuring 12 cm by 12 cm?

squares

6 Tick the measure that is equal to  $1 \text{ m}^2$

100 cm<sup>2</sup>

1,000 cm<sup>2</sup>

10,000 cm<sup>2</sup>

Complete the conversions.

a)  $4 \text{ m}^2 = \boxed{\phantom{000000}} \text{ cm}^2$        $40 \text{ m}^2 = \boxed{\phantom{000000}} \text{ cm}^2$

b)  $45 \text{ m}^2 = \boxed{\phantom{000000}} \text{ cm}^2$        $0.45 \text{ m}^2 = \boxed{\phantom{000000}} \text{ cm}^2$

c)  $4.5 \text{ m}^2 = \boxed{\phantom{000000}} \text{ cm}^2$        $0.0045 \text{ m}^2 = \boxed{\phantom{000000}} \text{ cm}^2$

d)  $60,000 \text{ cm}^2 =$    $\text{m}^2$        $600,000 \text{ cm}^2 =$    $\text{m}^2$

e)  $6,000 \text{ cm}^2 =$    $\text{m}^2$        $500 \text{ cm}^2 =$    $\text{m}^2$

**7** A hectare is a unit of measure of land, roughly the size of a football pitch.  
1 hectare = 10,000 m<sup>2</sup>

The average farm in the UK is 54 hectares.

**a)** What is the area of the average farm in the UK in  $\text{m}^2$ ?

**b)** What is the area of the average farm in the UK in  $\text{cm}^2$ ?  
Give your answer in standard form.

\_\_\_\_\_ cm<sup>2</sup>

**8** Show that  $800 \text{ cm}^2$  is the same as  $0.08 \text{ m}^2$

9 An army base measures 3 km by 7 km.

What is the area of the base in  $\text{m}^2$ ? Give your answer in standard form.

10 A UK postage stamp has an area of  $480 \text{ mm}^2$   
The area of an A4 sheet is  $0.062 \text{ m}^2$

**a)** Approximately how many postage stamps cover an A4 sheet of paper without overlap?

**b) Why can you not give an exact answer to part a)?**