

28/01/21

O LO: Can I continue to work out the areas of shapes and start to recognise when to use formulae to do so?

Using the maths input video for this week and the formula below, work out the areas of each rectangle based on their description. You are welcome to draw out the rectangle to support your working out if you feel that would help you. I would, however, like to see the following working out below in your work today (if you have a workings out book or page you can write them on alongside):

$A = L \times W$ (Area = Length $\times$ Width)

$A = 6\text{cm} \times 3\text{cm} = 18\text{cm}^2$

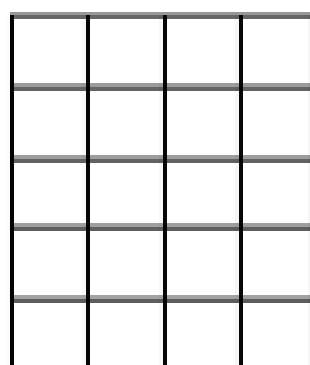
$A = 18\text{cm}^2$

Remember, you can also show your method of column multiplication within your working out if you are multiplying bigger numbers that you cannot just use your times tables to multiply.

Area of rectangles

Remember: area is measured in squares. Usually we measure small areas in square centimetres.

This can be written sq cm or cm^2 .



This shape has 5 rows of squares and there are 4 squares in each row. (5 lots of 4)

The area can be worked out by multiplying 5 by 4.

$5 \times 4 = 20$. The area is 20 sq cm or 20 cm^2 .

Count to check that this is correct.

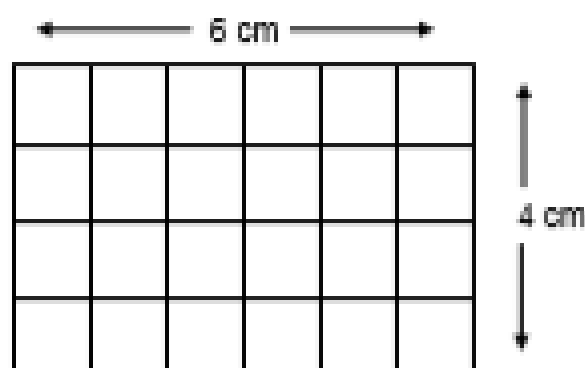
Write down a rule for finding the area of a rectangle.....
.....
.....

Find the area of these rectangles, by using the rule you wrote above.

1. A rectangle 6 cm long and 3 cm wide
2. A rectangle 5 cm long and 2 cm wide
3. A rectangle 10 cm long and 5 cm wide
4. A rectangle 8 cm long and 6 cm wide
5. A rectangle 4 cm long and 2 cm wide
6. A rectangle 15 cm long and 10 cm wide
7. A rectangle 20 cm long and 4 cm wide
8. A rectangle 11 cm long and 9 cm wide
9. A rectangle 25 cm long and 4 cm wide
10. A rectangle 20 cm long and 8 cm wide

Area of rectangles

You might have worked out an easy way to find the area of rectangles by now. Multiply the length by the width.



This rectangle is 6 cm long.

Its width or height is 4 cm.

Its area is 6 lots of 4, or 4 lots of 6 squares.

Area = $6 \times 4 = 24 \text{ sq cm}$
or 24 cm^2

Can you find a quick way of writing down how to find the area of a rectangle. You could use L for length and W for width and A for area. Write your formula in the box below:

Find the area of these rectangles:

1. A rectangle 7 cm long and 4 cm wide
3. A rectangle 20 cm long and 3 cm wide
5. A rectangle 5 cm long and 7 cm wide
7. A rectangle 30 cm long and 3 cm wide
9. A rectangle 50 cm long and 10 cm wide

2. A rectangle 7 cm long and 6 cm wide
4. A rectangle 6 cm long and 11 cm wide
6. A rectangle 12 cm long and 6 cm wide
8. A rectangle 14 cm long and 10 cm wide
10. A rectangle 40 cm long and 4 cm wide

Finding the approximate area



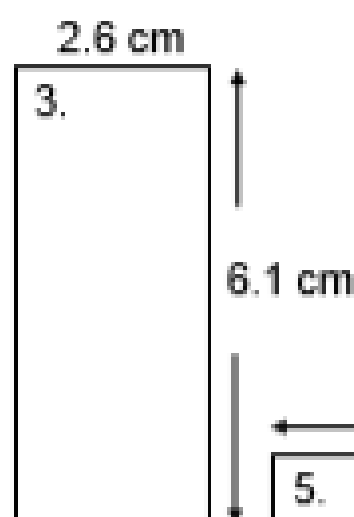
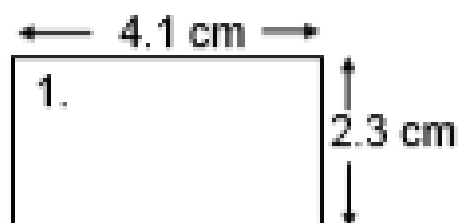
You don't always want to know exactly what an area is. Sometimes it is better to approximate. Round the measurements to the nearest whole centimetre and then find the approximate area of these shapes:



Length is approx. 4 cm

Width is approx 2 cm

Area is approx $4 \times 2 = 8$ sq cm



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|--------------|-------------|-------------|--------------|---------------|
| 1. 18 sq cm | 2. 10 sq cm | 3. 50 sq cm | 4. 48 sq cm | 5. 8 sq cm |
| 6. 150 sq cm | 7. 80 sq cm | 8. 99 sq cm | 9. 100 sq cm | 10. 160 sq cm |
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|-------------|-------------|--------------|--------------|---------------|
| 1. 28 sq cm | 2. 42 sq cm | 3. 60 sq cm | 4. 66 sq cm | 5. 35 sq cm |
| 6. 72 sq cm | 7. 90 sq cm | 8. 140 sq cm | 9. 500 sq cm | 10. 160 sq cm |
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|----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 1. 8 cm ² | 2. 21 cm ² | 3. 18 cm ² | 4. 30 cm ² | 5. 12 cm ² |
|----------------------|-----------------------|-----------------------|-----------------------|-----------------------|