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Finding the area of compound shapes.

A compound shape is a shape that is made up from other simple shapes. In example 1 we will be working out the area of a L shape (made up from 2 rectangles). To find the area of a compound shape, follow these simple steps:

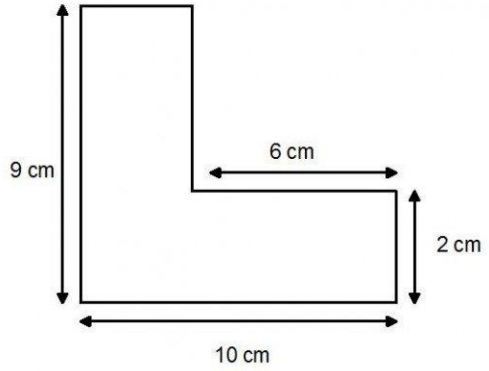
Step 1: Work out the missing lengths around the edge of the compound shape.

Step 2: Divide your L shape into two rectangles. This can be done in 2 different ways (both methods will give the same answer).

Step 3: Work out the area of each rectangle. Do this by multiplying the length of the rectangle by the width of the rectangle.
Step 4: Add the areas of the rectangles together to give the total area of the L shape.

Example 1

Find the area of this compound shape (L shape).

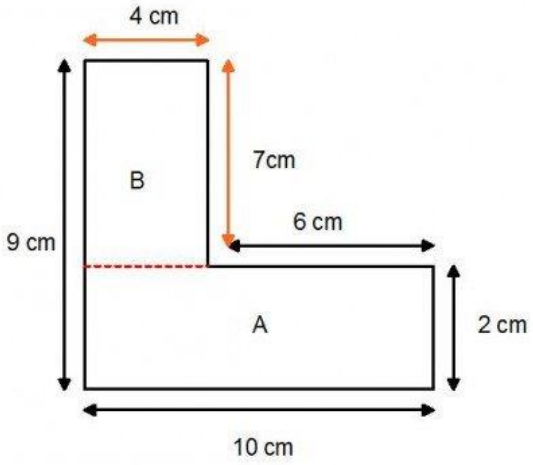


Step 1

Work out the missing lengths around the edge of the compound shape.

10 – 6 = 4 cm

9 – 2 = 7 cm



Step 2

Divide your L shape into two rectangles.

In this case I have put the line horizontal.

Step 3

Now you need to find the area of the 2 rectangles:

The area of rectangle A is 10 × 2 = **20 cm²**

The area of rectangle B is 4 × 7 = **28 cm²**

Make sure you select the correct length and width for each rectangle.

Step 4

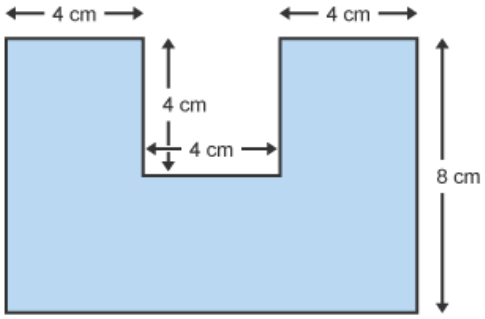
All you need to do now is to add up the 2 answers from step 3.

20 + 28 = 48 cm².

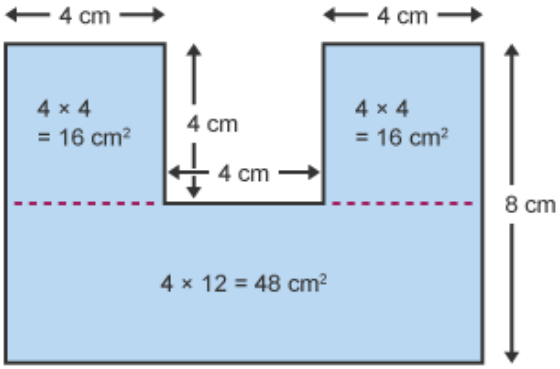
So the total area of the compound shape is 48 cm².

Example 2

Here is another type of compound shape and this can be worked out in two different ways but you should get the same answer whichever method you choose to use.



Method 1: Divide the shape into squares and rectangles, find their individual areas and then add them together.



The length of the larger rectangle is $4 + 4 + 4 = 12\ cm$

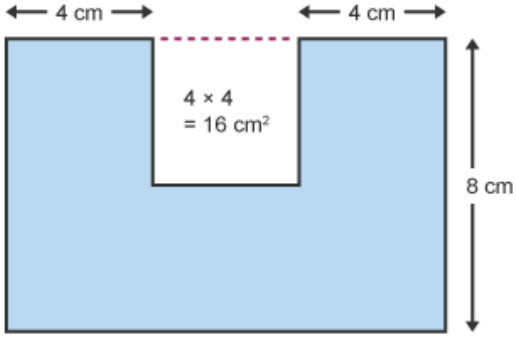
$$Area = 16 + 16 + 48 = 80\ cm^2$$

Method 2

Imagine the shape as a large rectangle with a section cut out.

The length of the outer rectangle is $4 + 4 + 4 = 12\ cm$ The width of the outer rectangle is **8cm**

Find the area of the large rectangle (12×8) and then subtract the part that has been cut out (4×4)



$$Area = (12 \times 8) - (4 \times 4) = 96 - 16 = 80\ cm^2$$

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