

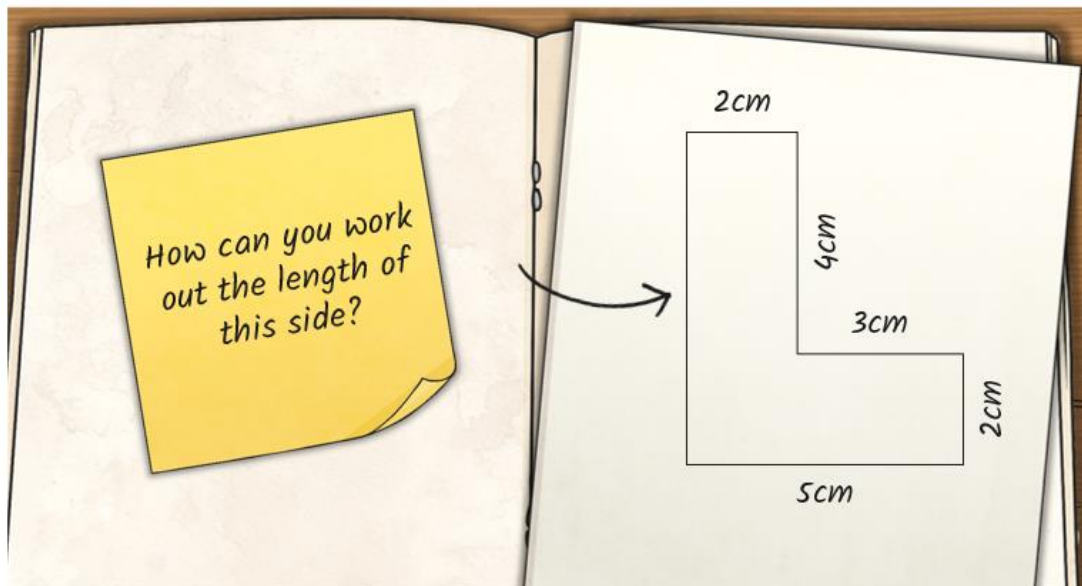
Perimeter - Finding the lengths of missing sides

Sometimes, not all sides are labelled, but with a bit of careful thinking you can work it out!

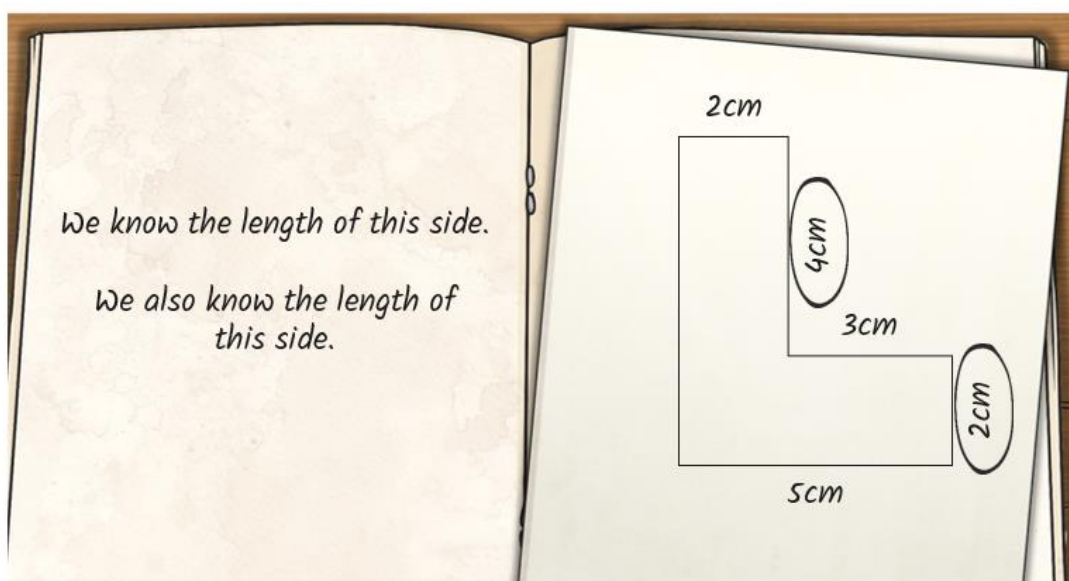
Calculating unknown sides by addition

Example

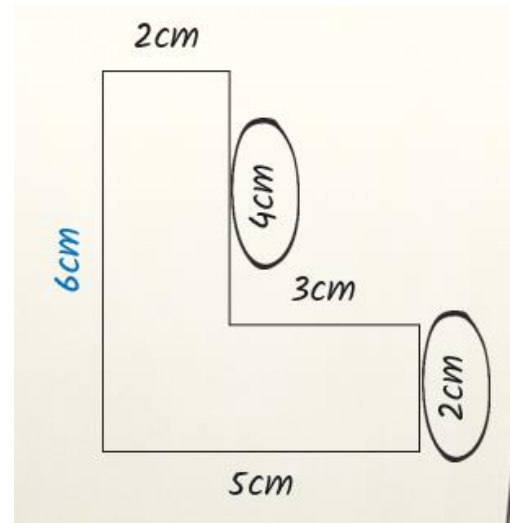
Let's have a look at an example:



Use what you know about other sides to help calculate the missing length.



So, to calculate the length of the unknown side, we do the following:
 $4\text{cm} + 2\text{cm} = 6\text{cm}$

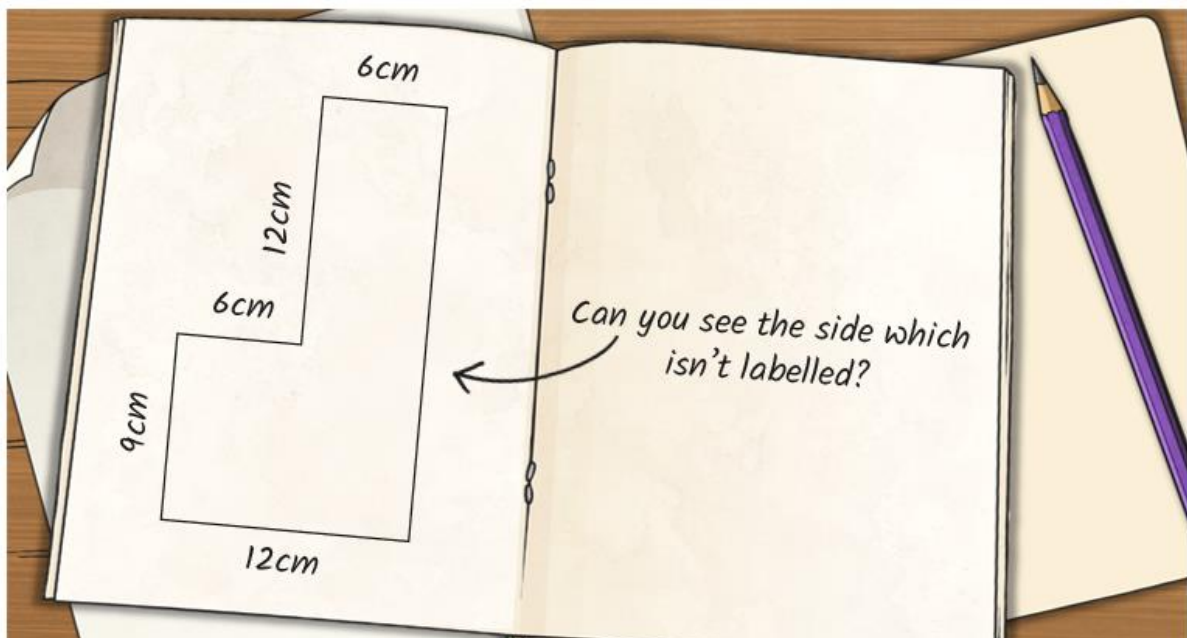


Now you know the lengths of all the sides, you can calculate the perimeter (add up the lengths of all the sides):

$$\text{Perimeter} = 6\text{cm} + 5\text{cm} + 2\text{cm} + 3\text{cm} + 4\text{cm} + 2\text{cm} = 22\text{cm}$$

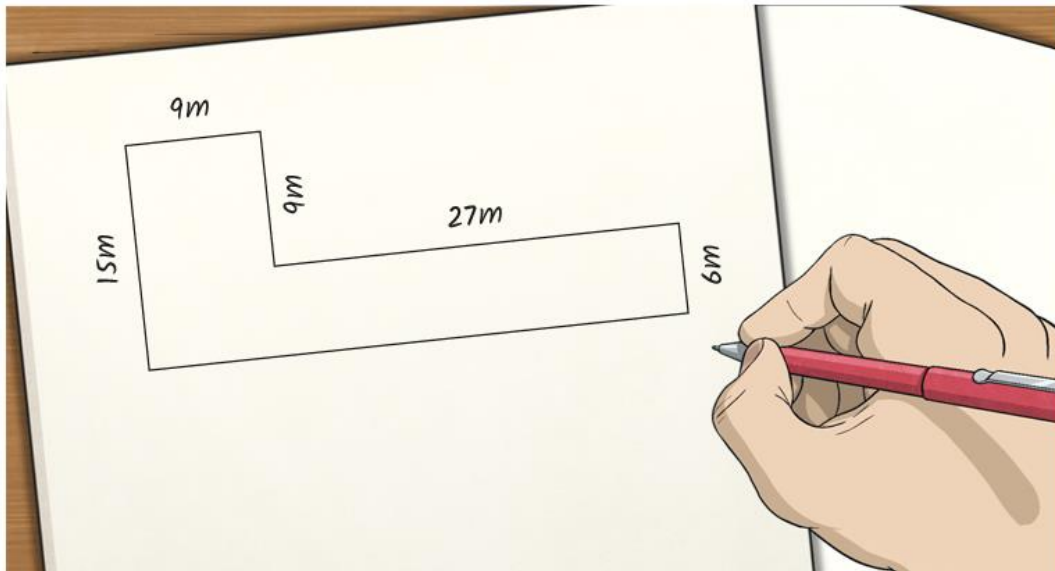
Activity 1

Use addition to calculate the missing length, then calculate the perimeter.



Activity 2

Use addition to calculate the missing length, then calculate the perimeter.

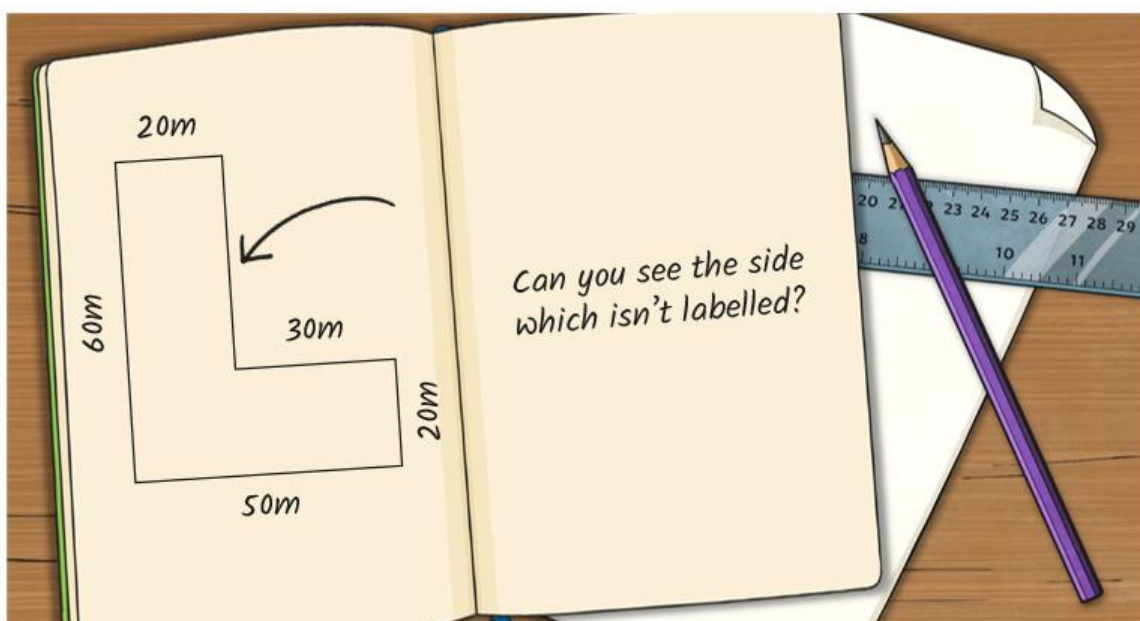


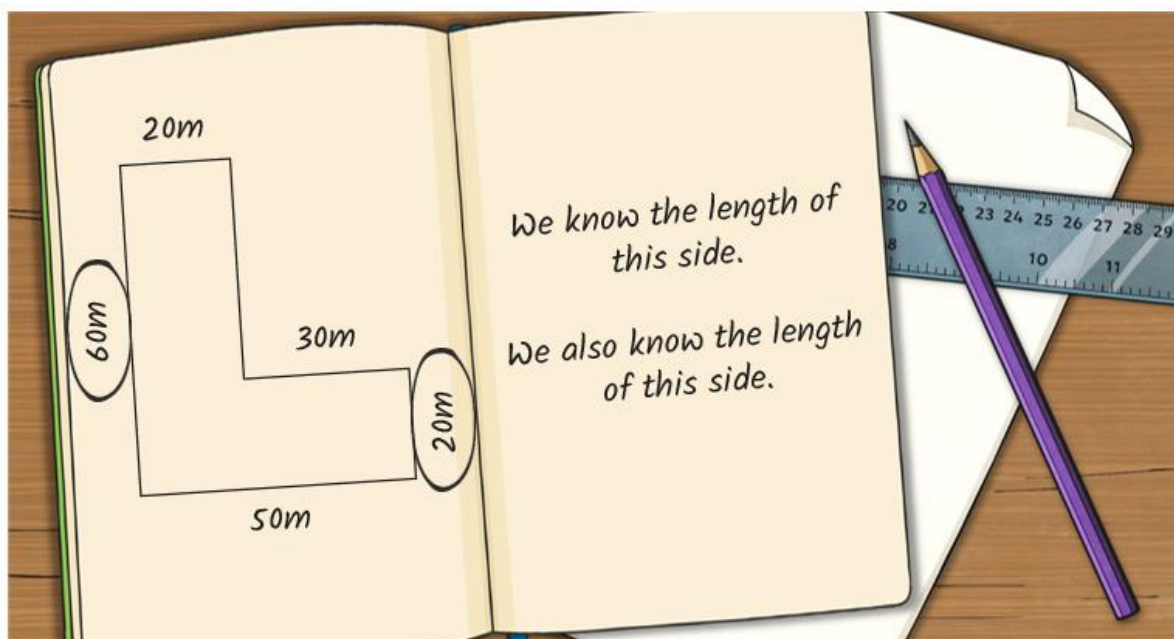
Calculating unknown sides by subtraction

To calculate the length of the side which is unknown, we sometimes need to use subtraction.

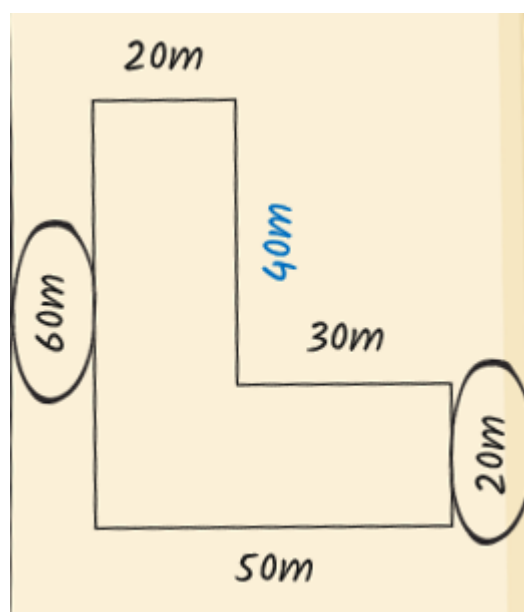
Example

Let's have a look at an example:





So, to calculate the length of the unknown side, we do the following:
 $60m - 20m = 40m$

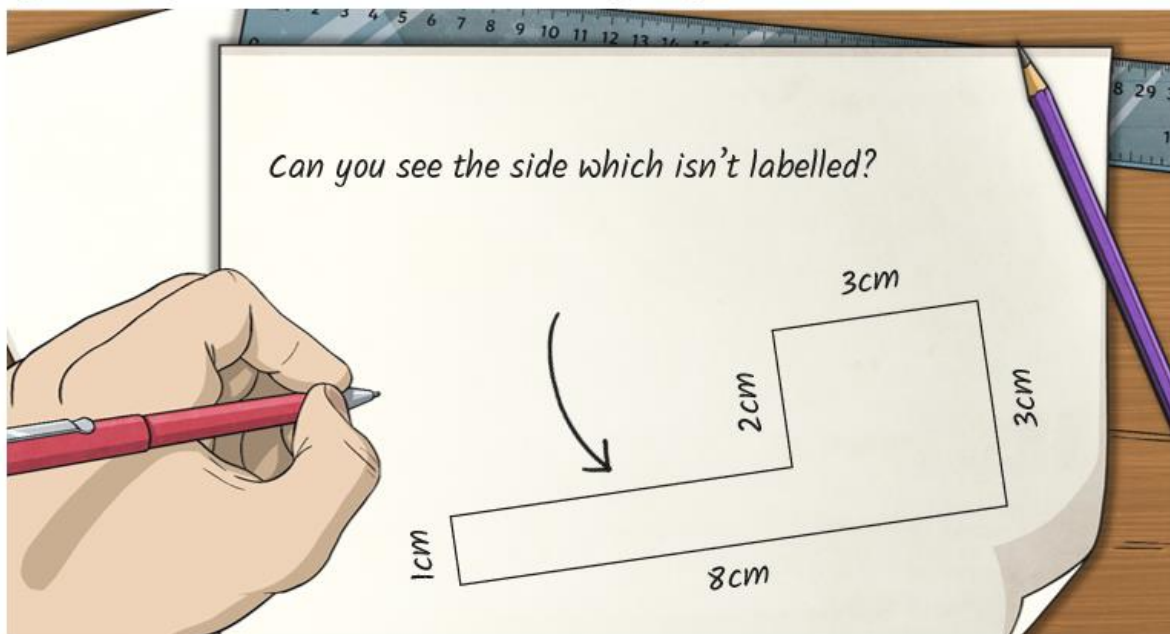


Now you know the lengths of all the sides, you can calculate the perimeter (add up the lengths of all the sides):

$$\begin{aligned} \text{Perimeter} &= 60m + 20m \\ &+ 40m + 30m + 20m + \\ &50m = 220m \end{aligned}$$

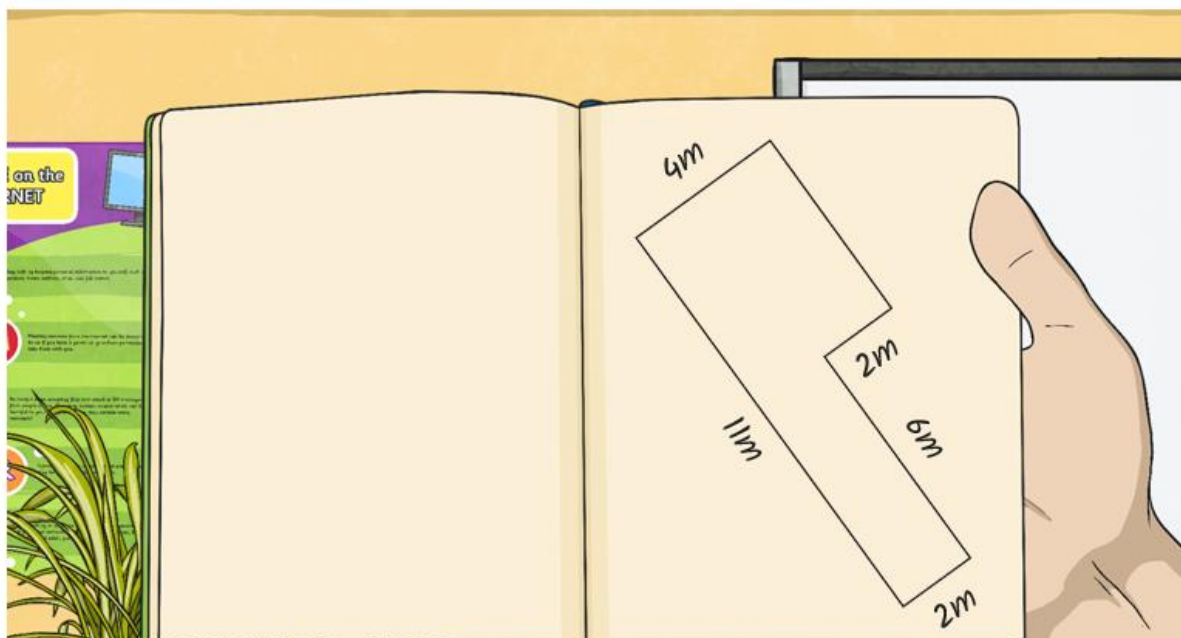
Activity 3

Use subtraction to calculate the missing length, then calculate the perimeter.



Activity 4

Use subtraction to calculate the missing length, then calculate the perimeter.

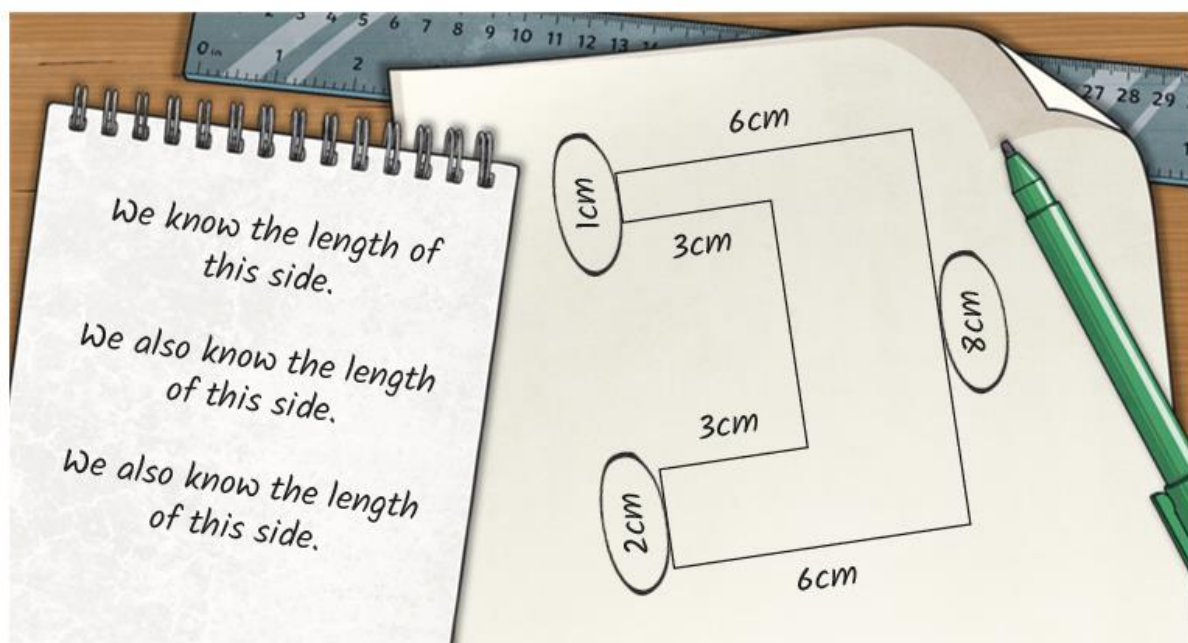
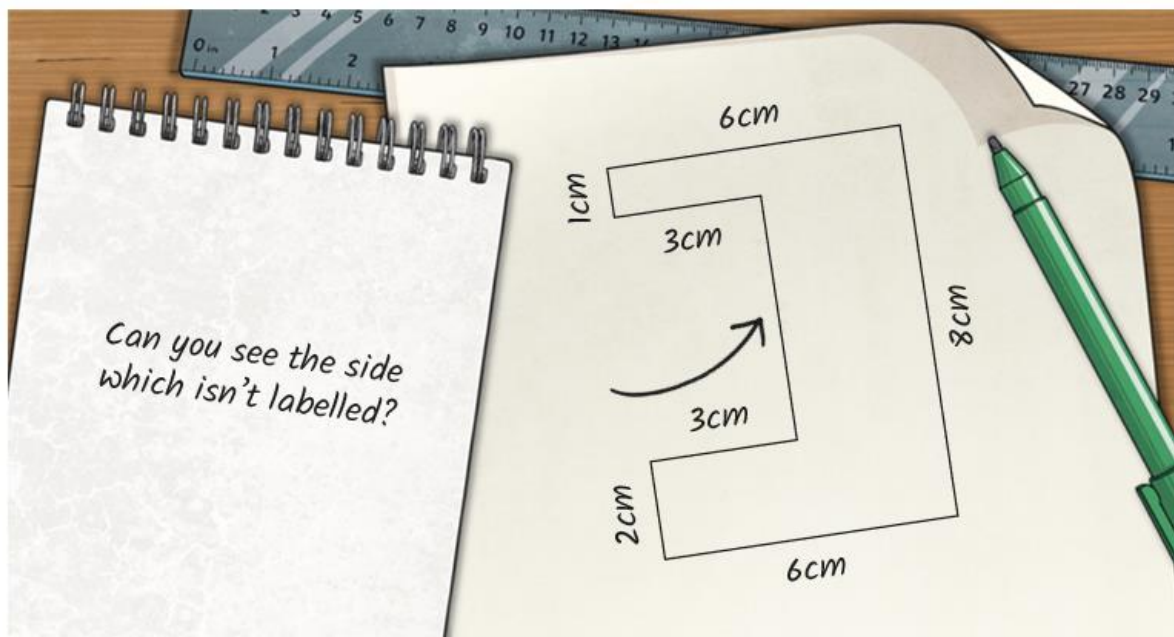


Calculating unknown sides by addition and subtraction

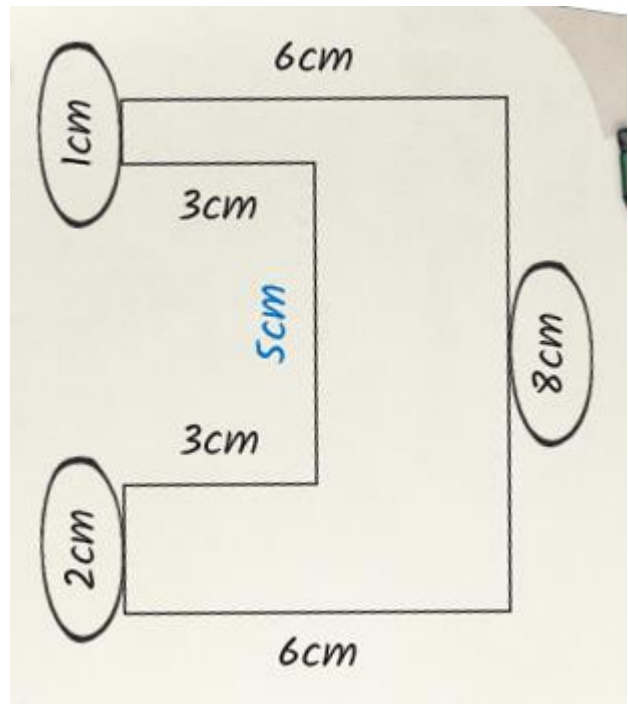
To calculate the length of the side which is unknown, we sometimes need to use addition and subtraction.

Example

Let's have a look at an example:



So, to calculate the length of the unknown side, we do the following:
 $8\text{cm} - (1\text{cm} + 2\text{cm}) = 5\text{cm}$

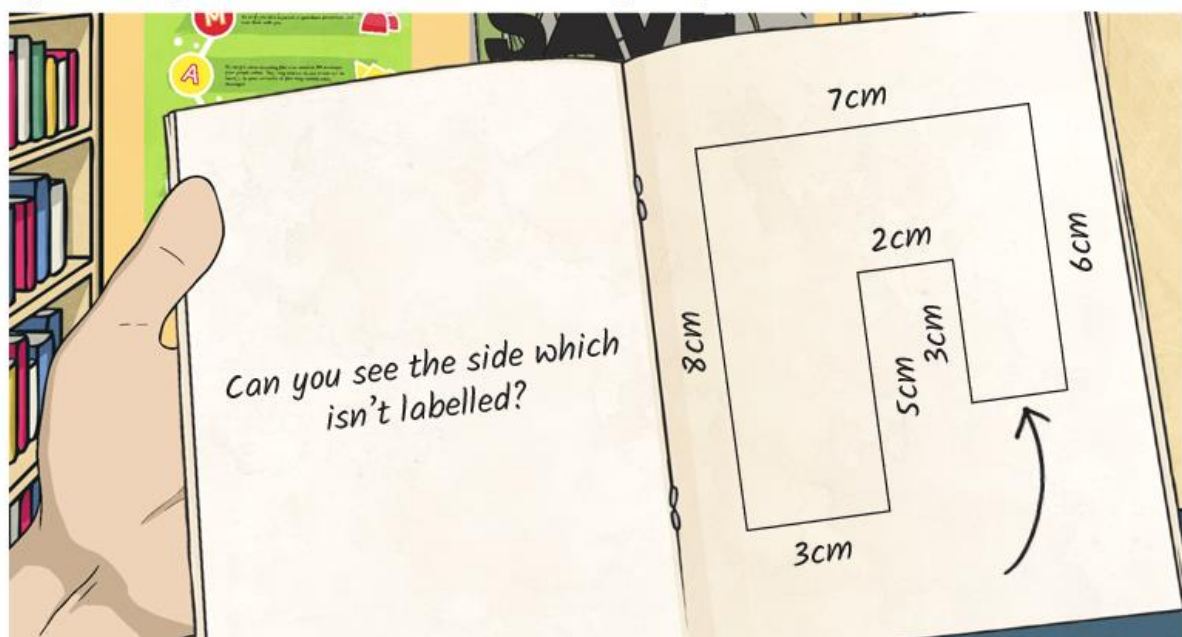


Now you know the lengths of all the sides, you can calculate the perimeter (add up the lengths of all the sides):

$$\begin{aligned} \text{Perimeter} &= 1\text{cm} + 3\text{cm} \\ &+ 5\text{cm} + 3\text{cm} + 2\text{cm} + 6\text{cm} \\ &+ 8\text{cm} + 6\text{cm} = 34\text{cm} \end{aligned}$$

Activity 5

Use addition and subtraction to calculate the missing length, then calculate the perimeter.



Activity 6

Use addition and subtraction to calculate the missing length, then calculate the perimeter.

