

L.O: To be able to convert between
different units of measure

Remember we had a lesson with Mr Smith on measures and how to convert between them.....

We are going to do each unit of measure one by one just to make sure we completely understand

By the end of this lesson you should be able to:

Convert from millimetres (mm) to centimetres (cm) and vice versa.

Convert from centimetres (cm) to metres (m) and vice versa.

Compare and order mixed metric measurements of length.

Lets link it to our classification topic: Arachnids: Sizes of spiders....

There are more than 40 000 different species of spider in the world.
They are found in every continent except Antarctica

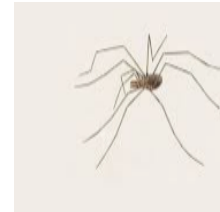
Here are the average lengths of the bodies of some
different species of spider:



wolf spider
3cm 4mm



cellar spider
2.5cm



harvestman spider
9mm



orb-weaver spider
38mm



Sydney funnel-web
spider
3cm 5mm
king baboon spider
8cm 7mm



trapdoor spider
2.8cm



Goliath bird eater
11.9cm

Obviously it is easier to compare measurements when they are all written in the same unit.

To do this, we could convert the measurements given in centimetres to millimetres.

How many millimetres
are in one centimetre?

How do we convert
centimetres to
millimetres?

How many millimetres are
in one centimetre?

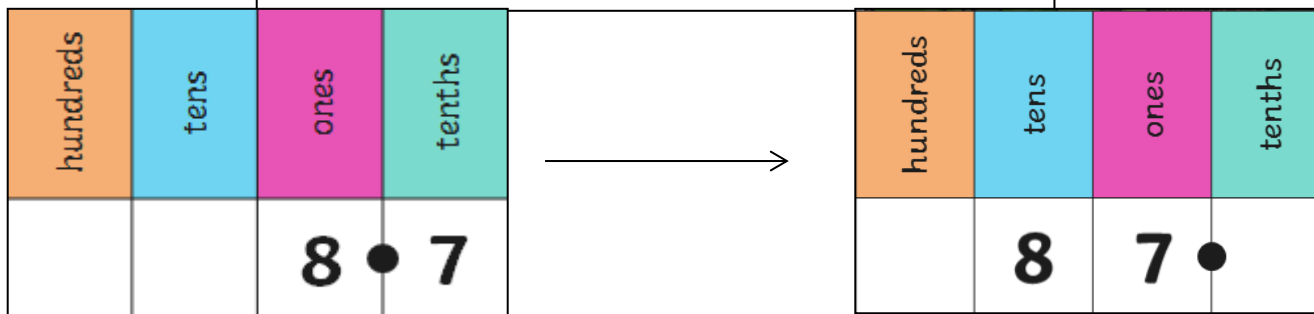
$$1\text{cm} = 10\text{mm}$$

How do we convert
centimetres to millimetres?

We multiply by 10.

Or jump the decimal
how I have shown you
before- but shhhh
don't tell Miss Perkins!

To multiply by 10,
each digit moves one
place to the left:



**Convert these measurements from centimetres to millimetres.
(draw out the table).**

Centimetres	Millimetres
6.8cm	
5.1cm	
4.2cm	

There are 10mm in 1cm, so for every 10mm in a measurement you can count 1cm. For example in 93mm there are 9cm

There is 3mm left over.
There aren't enough left over to make a whole centimetre.
So we write them as mm on their own:

9cm 3mm

Centimetres	Millimetres	Centimetres and Millimetres
6.8cm		6cm 8mm
5.1cm		5cm 1mm
4.2cm		4cm 2mm

We could also convert the measurements that were given in millimetres into centimetres.

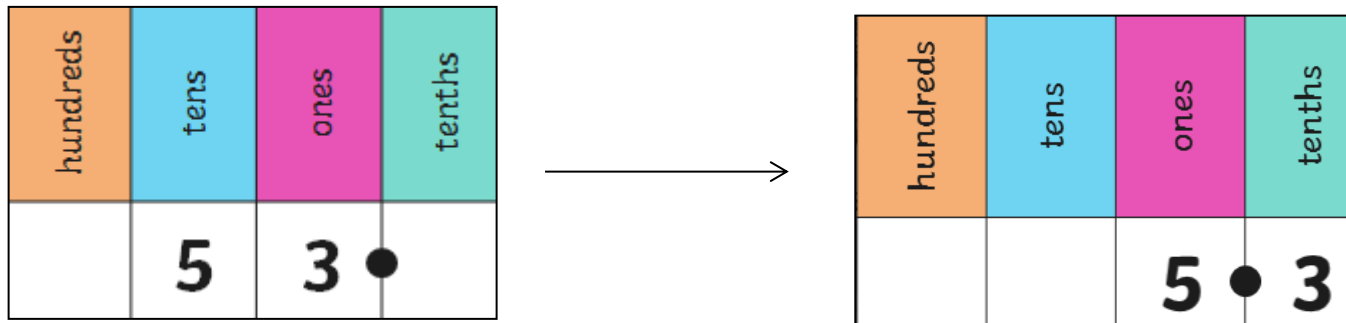
How many millimetres are in one centimetre?

$$1\text{cm} = 10\text{mm}$$

How do we convert millimetres to centimetres?

We divide by 10.

To divide by 10, each digit moves one place to the right:



Use what you've learnt and the information in the grid to fill in the gaps about the sized of spiders. (in your book)

Write like this:

Sydney Funnel-Web Spider: Centimetres =
Millimetres=

Only write out the ones that are missing

Average Body Lengths of Spiders			
Spider	Centimetres	Millimetres	cm and mm
king baboon spider	8.7cm	87mm	8cm 7mm
Sydney funnel-web spider			3cm 5mm
trapdoor spider	2.8cm		
harvestman spider		9mm	
cellar spider	2.5cm		
wolf spider			3cm 4mm
orb-weaver spider		38mm	
Goliath birdeater	11.9cm		

Extension: Write 3 comparison sentences

eg:

Sydney Funnel-Web < Orb-Weaver spider

Sometimes you need have to measure something using bigger measurements... so let's move on to a bigger animal...SNAKES



boa constrictor
213cm



puff adder
115cm



blind snake
32cm

king cobra
4m 86cm



giant anaconda
5m 21cm

reticulated python
3.95m



black mamba
255cm

rattlesnake
1m 85cm



Remember, when comparing or ordering measurements, it is better to ensure that all measurements are written in the same unit.

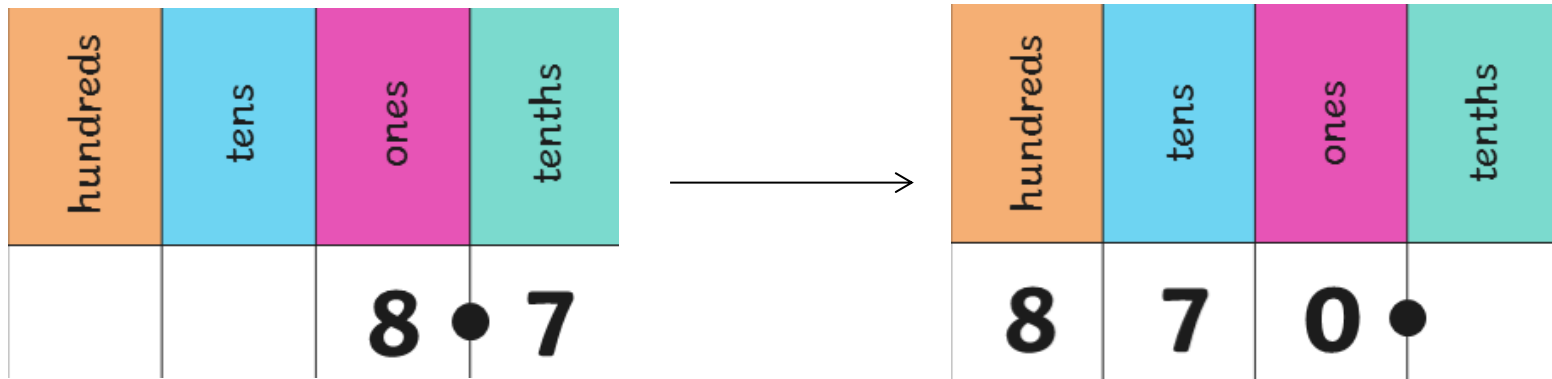
How many centimetres are in one metre?

$$1\text{m} = 100\text{cm}$$

How do we convert metres to centimetres?

We multiply by 100.

To multiply by 100, each digit moves two places to the left:



**Convert these measurements from metres to centimetres in your book
(draw out the table).**

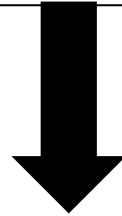
Metres	Centimetres
2.32m	
5.59m	
4.85m	

Can you remember how to change it into both measurements – have a go in your books..

Metres	Centimetres	Metres and Centimetres
2.32m		
5.59m		
4.85m		

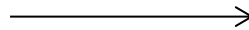
How do we convert
centimetres to metres?

We divide by 100.



To divide by 100,
each digit moves two
places to the right:

hundreds	tens	ones	tenths	hundredths
3	5	1	•	



hundreds	tens	ones	tenths	hundredths
		3	•	5
				1

Use what you've learnt and the information in the grid to fill in the gaps about the sized of snakes. (in your book)

Only write out the ones that are missing

Set it out the same as you did for the spiders.

Average Lengths of Snakes			
Snake	Metres	Centimetres	m and cm
giant anaconda	5.21m	521cm	5m 21cm
puff adder			1m 15cm
boa constrictor		213cm	
rattlesnake			1m 85cm
black mamba		255cm	
king cobra			4m 86cm
blind snake		32cm	
reticulated python	3.95m		

Extension: Order the snakes from
longest to shortest