

CHAPTER 01

KNOWING OUR NUMBERS


Large Numbers in Daily life:

We use numbers in everyday life in numerous situation such as this,

- Which of these horses is taller or longer? How do we know?

Which is taller? Which is longer?

How do we know?



In real life we **measure** height & length using **distances**.

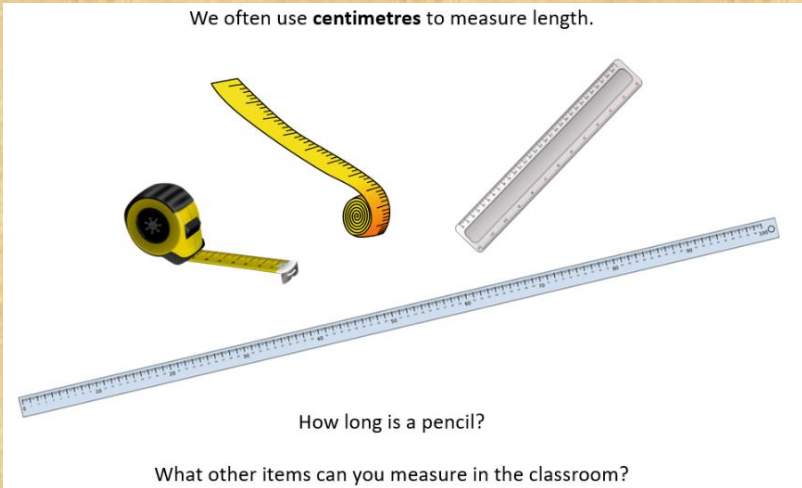
Horses are sometimes measured in **hands** – a measurement that dates back 3000 years!

What measurements do we use in modern times to measure length?

In real life, we measure height and length using distances. Horses are sometimes measured in hands – a measurement that dates back 3000 years.

- What measurements do we use in modern times to measure length?

We often use centimeters to measure length.



- How long is the pencil that you use? What other items you can measure in the classroom?

Let us assume we have used the ruler and found out that the horse is 200 centimeters tall. How else can we describe this length?

Note that 100 centimeters makes 1 meter, so the height of horse can also be represented as 2m.

The horse is 200 centimetres tall.

How else can we describe this length?

100 centimetres = 1 metre
So, 200 centimetres is the same as 2 metres.

We shall now look at metric system closely. The metric system started in France in 1790.

This is a system designed to make it easy to measure any real-life quantity. Units are in multiples of 10 of a base unit.

The Metric System

Started in France in 1790.

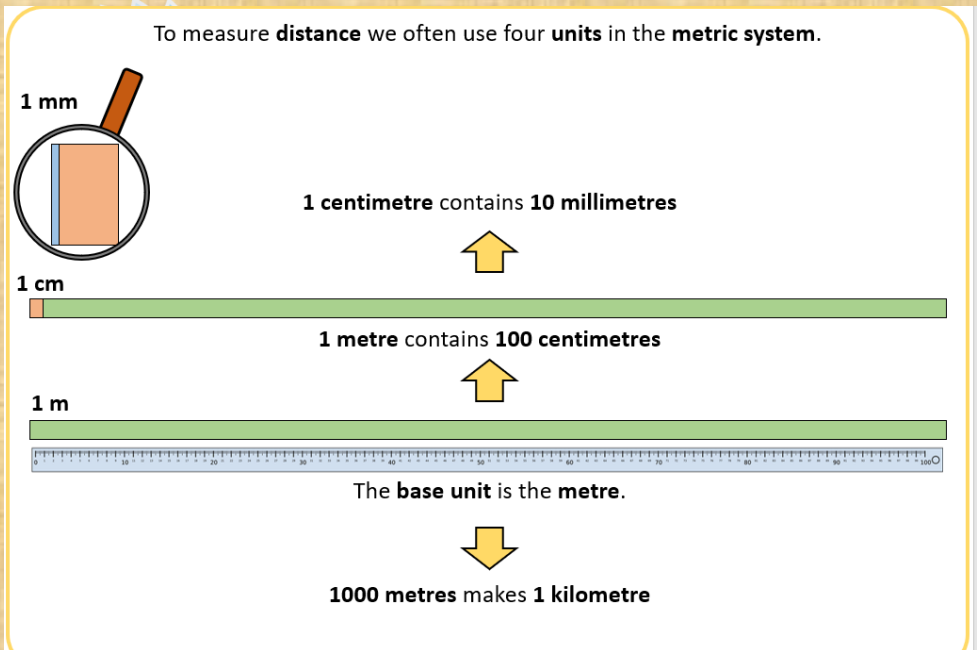
This is a system designed to make it easy to measure any real-life quantity. Units are in multiples of 10 of a **base unit**.

We use metric system for measuring length, mass and capacity.

Let us look at the measurement of Length. The base unit of measurement of length is meter as shown here.

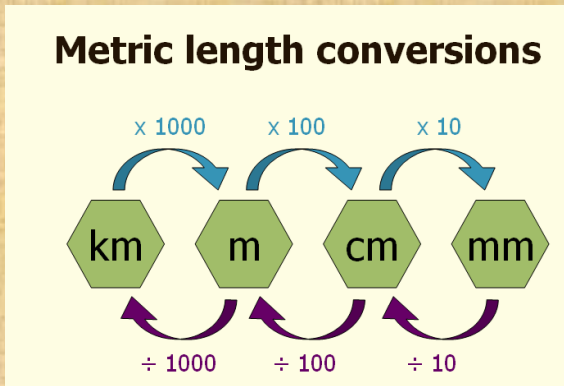
1 meter contains 100 centimeter and 1 centimeter contains 10 millimeters.

For measuring long distances more than meters such as distances between two cities, we use kilometers.

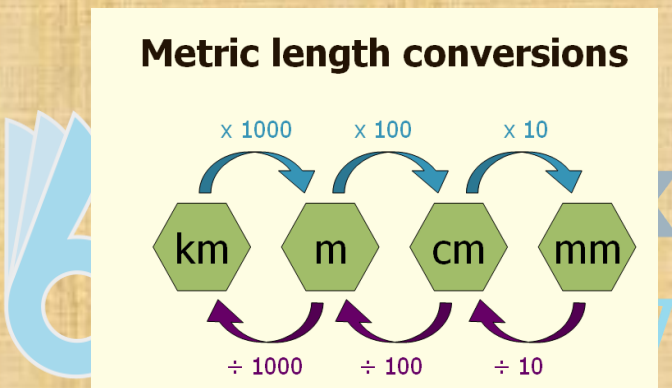


Let us look at the method to convert the length measurements.

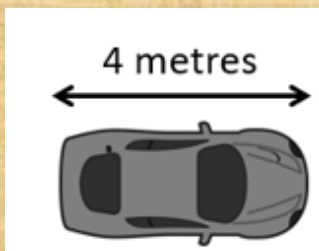
When we convert from higher units to lower units we multiply by 1000, 100 and 10 respectively.



When we convert from lower units to higher units, we divide by 1000, 100 and 10 respectively.



- Express the length of the car in centimeters.



Let us recall the conversion facts.

$$1\text{km} = 1000\text{m}$$

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

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

Converting Metric Units

1 kilometre = 1000 metres

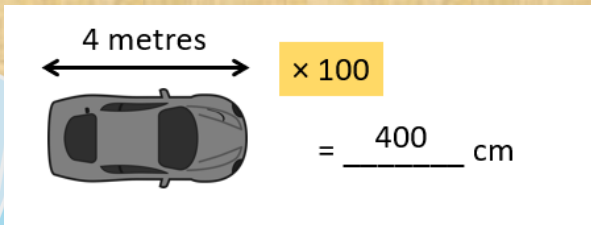
1 metre = 100 centimetres

1 centimetre = 10 millimetres

We have to choose the required conversion, which is the middle one.

1m = 100 centimeters.

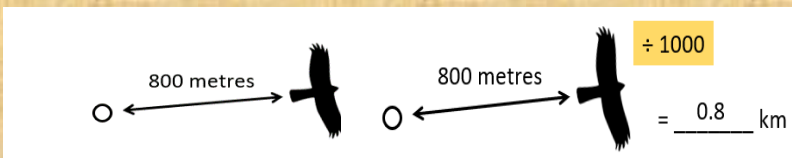
The conversion is bigger unit to small units, hence we multiply by 100, and so the length of the care in cm is 400 cm.



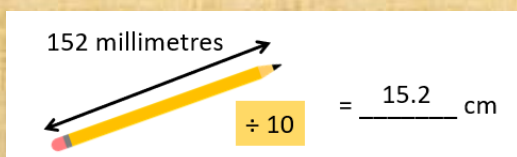
Examples:

- Convert 800 m to km.

Small to big conversion will be division hence the answer will be, so the distance is 0.8 km.



- Convert 152 mm to cm.



This will be again small to big conversion, which will be division.

Therefore, the length of pencil will be 15.2 cm.

In the same way, we measure rice in kilograms, But Jeera, Haldi powder we may use smaller units such as g.

We use litres for buckets of water. While we may use medicine in ml.

Let us look at the conversion of units once again.

Measurement of distance (Show only the first column one by one), measurement of mass (Show second column one by one) and measurement of capacity (Show last column one by one).

