



**SUBJECT – MATHEMATICS**  
**CLASS – III**  
**TOPIC – LENGTH**



# PDF CHAPTER LINK

[Length for Class III PDF](#)



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download the chapter



# LEARNING OBJECTIVES

**Students will be able to:**

- **Identify the objects which are measured by their length.**
- **Compare the objects having different lengths.**
- **Measure the lengths of different objects.**
- **Convert metres into centimetres and kilometres into metres**
- **Convert centimetres into metres and metres into kilometres**
- **Explain addition and subtraction of different length measurements**
- **Solve the word problems based on length**

# LENGTH





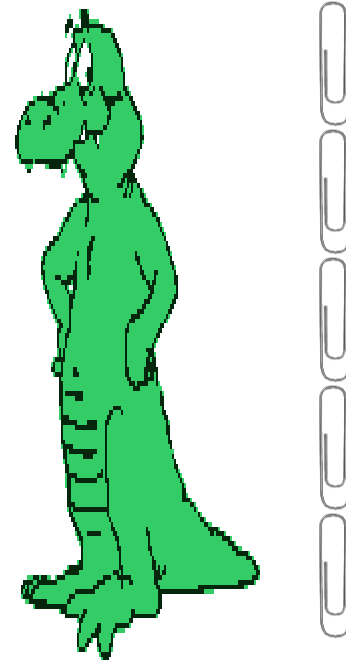
# LENGTH

**What is length?**

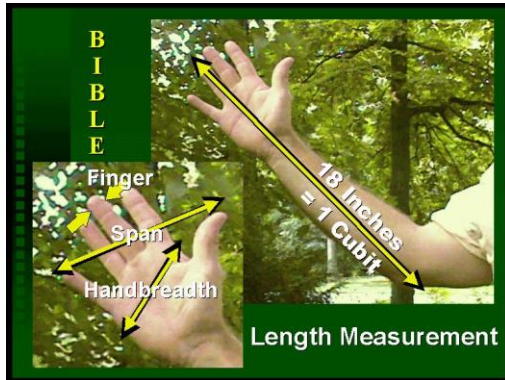
**Length is a distance from one point to another point  
The standard unit for length is metre. Let us look at the example  
below.**

**What is the height of the reptile?**

**The answer is 5 units**



# Ancient ways to measure length



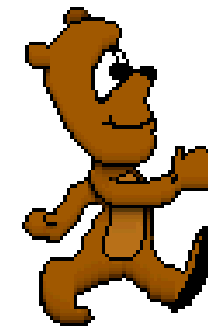
cubit



arm span



foot



stride

# Introduction

**Students will be asked to measure the length of their desk using their hand spans and then share their findings**





## Findings will be like this:

STUDENT	LENGTH (in hand spans)
1	8 hand spans
2	6 hand spans
3	9 hand spans

**Measuring will give different results as length of hand spans of each student is different.**

**SO THIS METHOD OF MEASUREMENT IS NOT CORRECT.**





# Different people/creatures has different size of body parts

For example a man walks,



The bear below also walks,

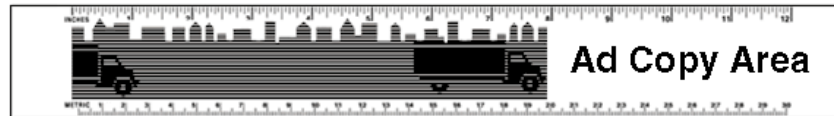


But all of them have different stride.

That is why we cannot measure length by using our body parts

# Measuring Tools

These are the measuring tools that we use to measure length. All the measuring tools shown are in the standard units.



Ruler



measuring tape

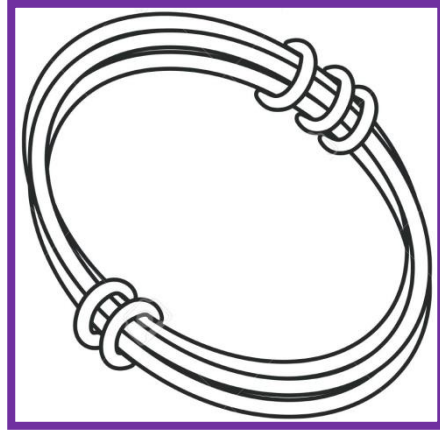


measuring tape

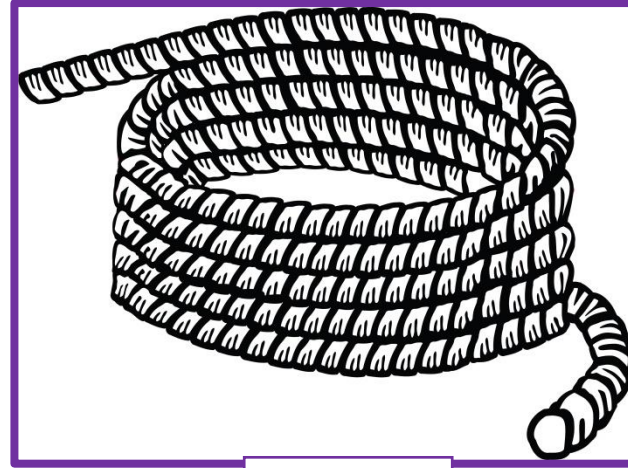
# Which of the following objects can be measured in length?



# Objects sold by measuring length



**Wire**



**Rope**



**Ribbon**

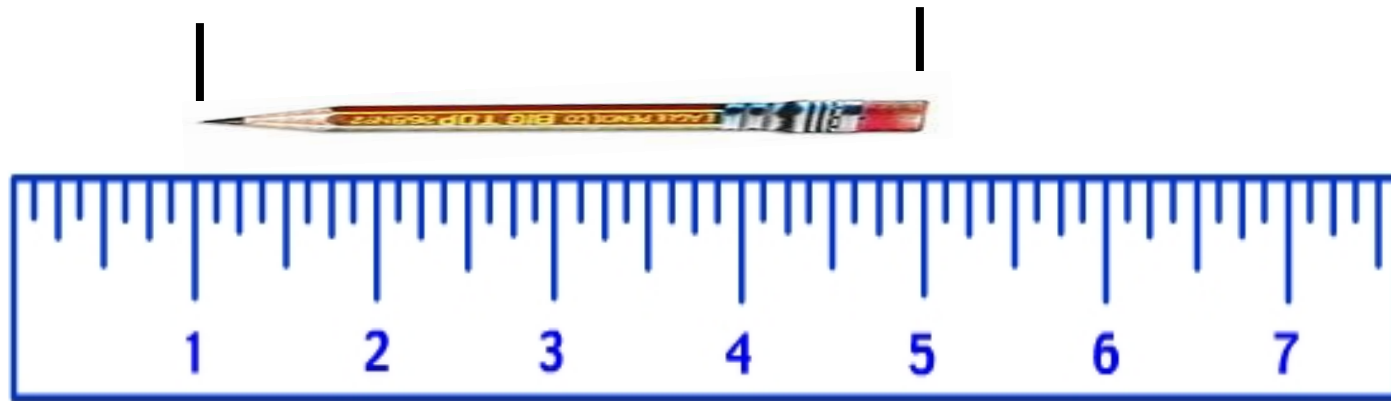


**Cloth**



# How to measure length?

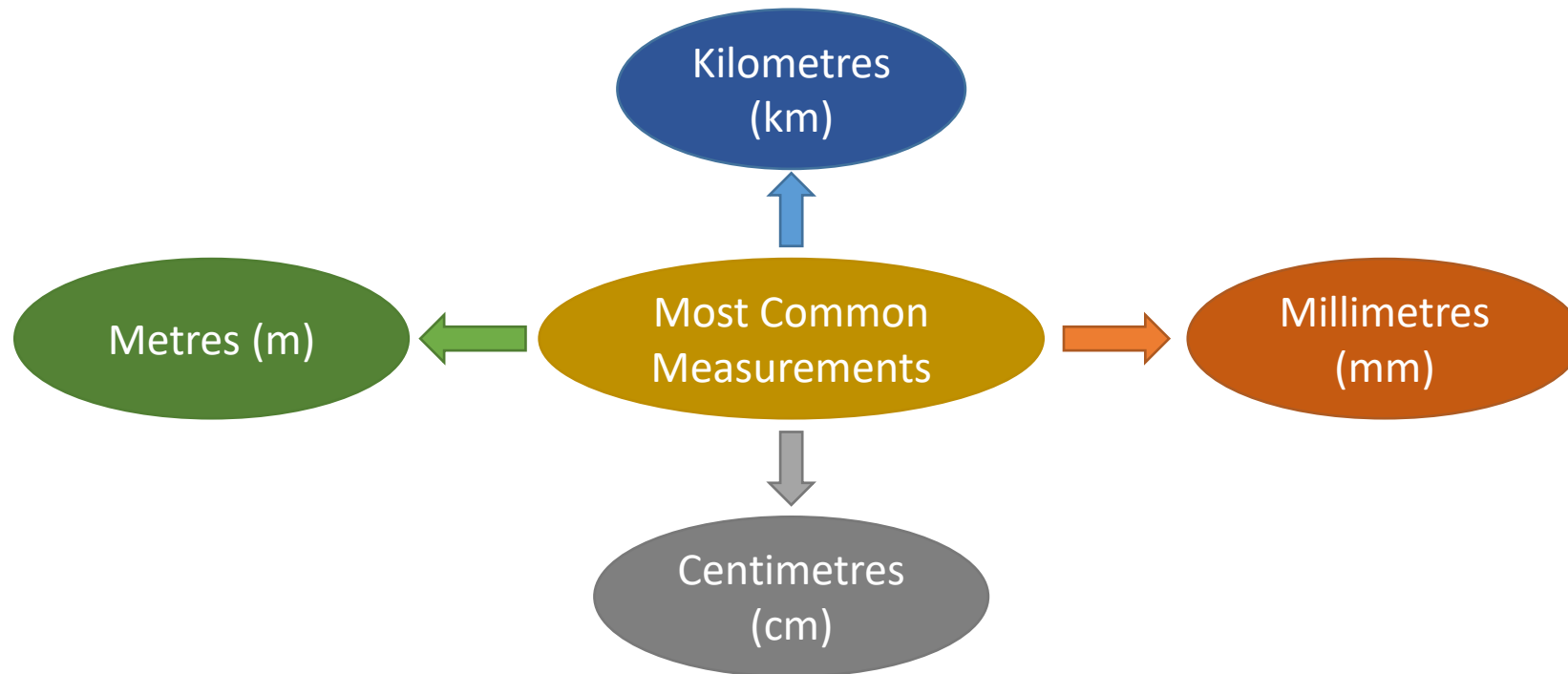
Let us look at the pencil below?



The length of the pencil is  $5 \text{ cm} - 1 \text{ cm} = 4 \text{ cm}$



We can measure how long things are.  
How long, tall or how far apart they are.  
**These are all units of length measurements**



Smallest unit of  
length

Millimetre (mm)



1 mm



2 mm

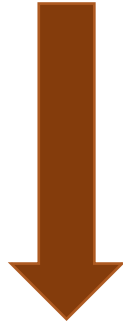


5 mm

Millimetres (mm)

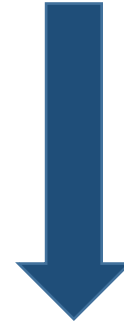


Standard  
unit of  
length



Metre (m)

Biggest unit  
of length



Kilometre  
(km)





# Units of Length and their relationship

## **Remember:**

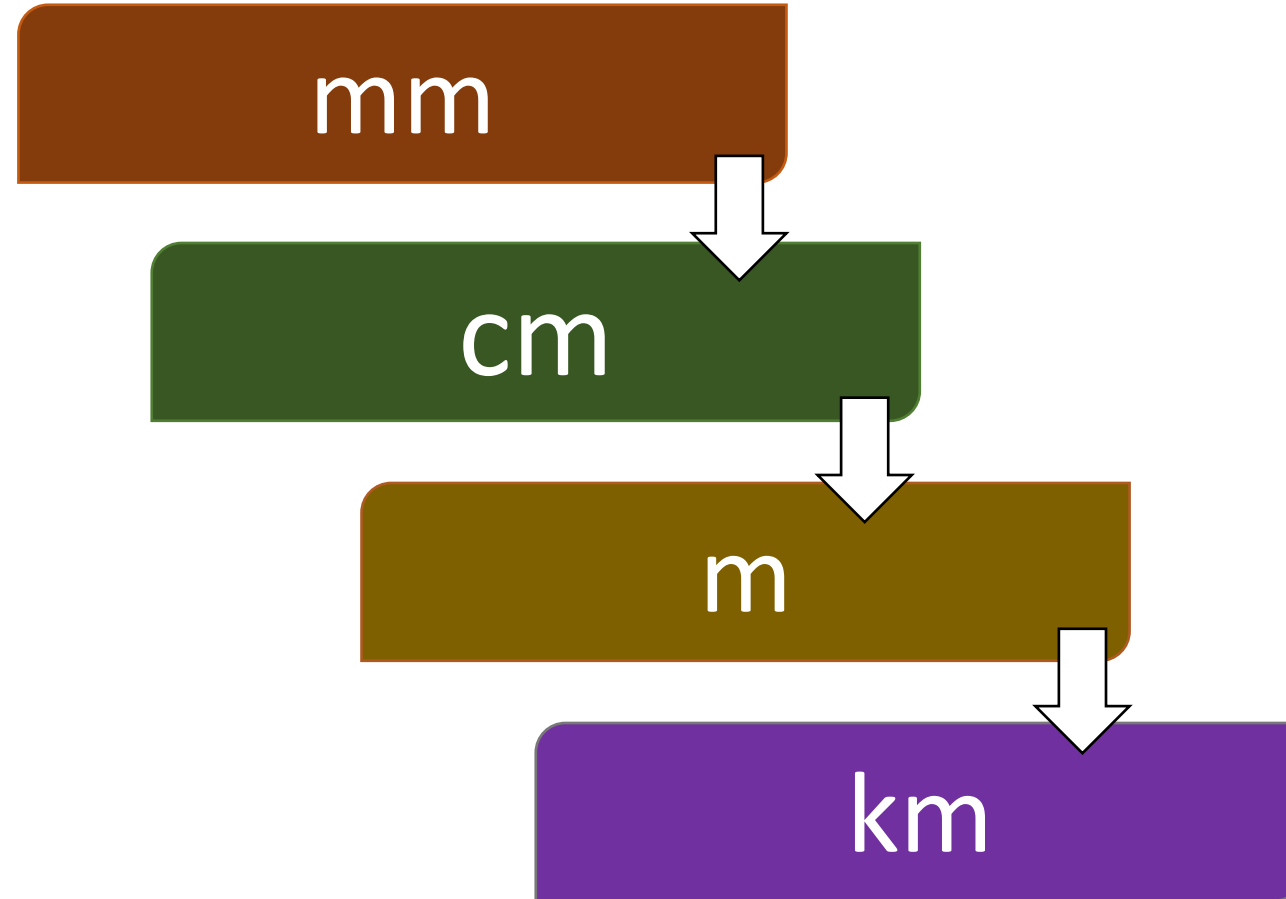
Kilometre is written as km  
Metre is written as m  
Centimetre is written as cm  
Millimetre is written as mm

The biggest unit of length is kilometre(km).  
Standard unit of length is metre(m).  
Smallest unit of length is millimetre(mm)

1 kilometre = 1000 metre  
1 metre = 100 centimetre  
1 centimetre = 10 millimetre



# Units of length from smaller to larger



# Metres

**Metres can be used to measure the length of a house, length of a blackboard or the size of a playground.**



**Trousers**



**Curtains**

**Length of the cloth needed to stitch a trouser or a curtain is expressed in metres.**

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

# Kilometre

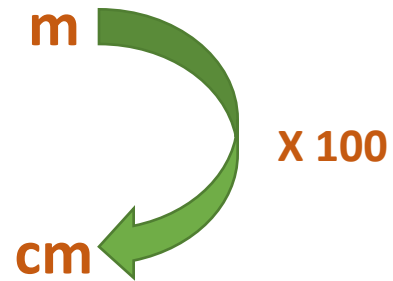
- We need bigger unit of length to measure roads, distance between the Earth and the Moon and distance between two cities.
- To measure big lengths and long distances, we make use of the unit called kilometre.



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



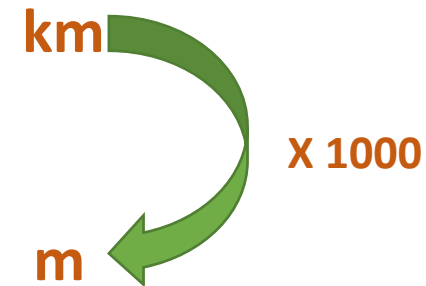
# Converting bigger unit into smaller unit



## Metre to centimetres:

We multiply the number of metres by 100 to convert 'metres' into 'centimetres'

For example:     15 m  
                      = 15 X 100 cm  
                      = 1500 cm



## Kilometre to metres:

We multiply the number of kilometres by 1000 to convert 'kilometres' into 'metres'

For example:     97 km  
                      = 97 X 1000 m  
                      = 97000 m



# Conversions

## Metre and centimetre to centimetre:

We multiply the number of metres by 100 to convert 'metres' to 'centimetres' and add the number of centimetres.

$$\begin{aligned}\text{For example: } & 8\text{m } 35\text{cm} \\ &= 8 \times 100 \text{ cm} + 35 \text{ cm} \\ &= 800 \text{ cm} + 35 \text{ cm} \\ &= 835 \text{ cm}\end{aligned}$$

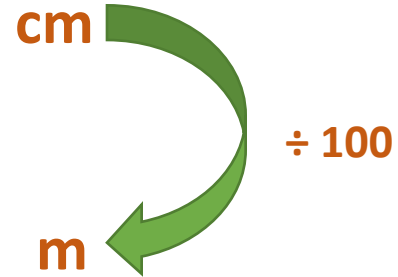
## Kilometre and metre to metre:

We multiply the number of kilometres by 1000 to convert 'kilometres' to 'metres' and add the number of metres.

$$\begin{aligned}\text{For example: } & 12\text{km } 170\text{m} \\ &= 12 \times 1000 \text{ m} + 170 \text{ m} \\ &= 12000 \text{ m} + 170 \text{ m} \\ &= 12170 \text{ m}\end{aligned}$$



# Converting smaller unit into bigger unit

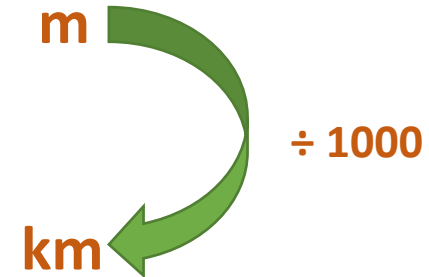


## Centimetre to metres:

We divide the number of centimetres by 100 to convert 'centimetres' into 'metres'

$$\begin{aligned}\text{For example: } & 2700 \text{ cm} \\ & = 2700 \div 100 \\ & = 27\end{aligned}$$

**Answer.** 2700 cm = 27 m



## Metres to kilometres:

We divide the number of metres by 1000 to convert 'metres' into 'kilometres'

$$\begin{aligned}\text{For example: } & 32000 \text{ m} \\ & = 32000 \div 1000 \\ & = 32\end{aligned}$$

**Answer.** 32000 m = 32 km

## Convert centimetres to metres and centimetres

525 cm

$$\begin{array}{r} 5 \leftarrow \text{Quotient} \\ 100 \overline{) 525} \\ \underline{500} \\ 25 \leftarrow \text{Remainder} \end{array}$$

$$525 \text{ cm} = 5 \text{ m } 25 \text{ cm}$$







# Convert metres to kilometres and metres

8415 m

$$\begin{array}{r} 8 \leftarrow \text{Quotient} \\ 1000 \overline{) 8415} \\ \underline{8000} \\ 415 \leftarrow \text{Remainder} \end{array}$$

8415 m = 8 km 415 m





# Word Problems

**Q. Somu covers a distance of 25 km 460 m and Adyasha covers 19 km 650 m. Find the total distance covered by them.**

Distance covered by Somu = 25 km 460 m

Distance covered by Adyasha = 19 km 650 m

	km	m
	11	1
Total distance covered by them =	25	460
+	19	650
	45	110



**Answer. Somu and Adyasha covered a distance of 45 km 110 m**



# Word Problems

**Q. Sibü has a 8 m 56 cm long ribbon. He cuts 5 m 75 cm long ribbon from it. How much ribbon is left with him?**

Length of ribbon Sibü had = 8 m 56 cm

Length of ribbon cut = 5 m 75 cm

	m	cm
Length of ribbon left with Sibü =	<del>8</del>	<del>56</del>
-	5	75
<hr/>		
	2	81
<hr/>		

We cannot subtract 75 from 56 so, let's borrow 1 m



**Answer. Sibü has 2m 81 cm ribbon left with him.**

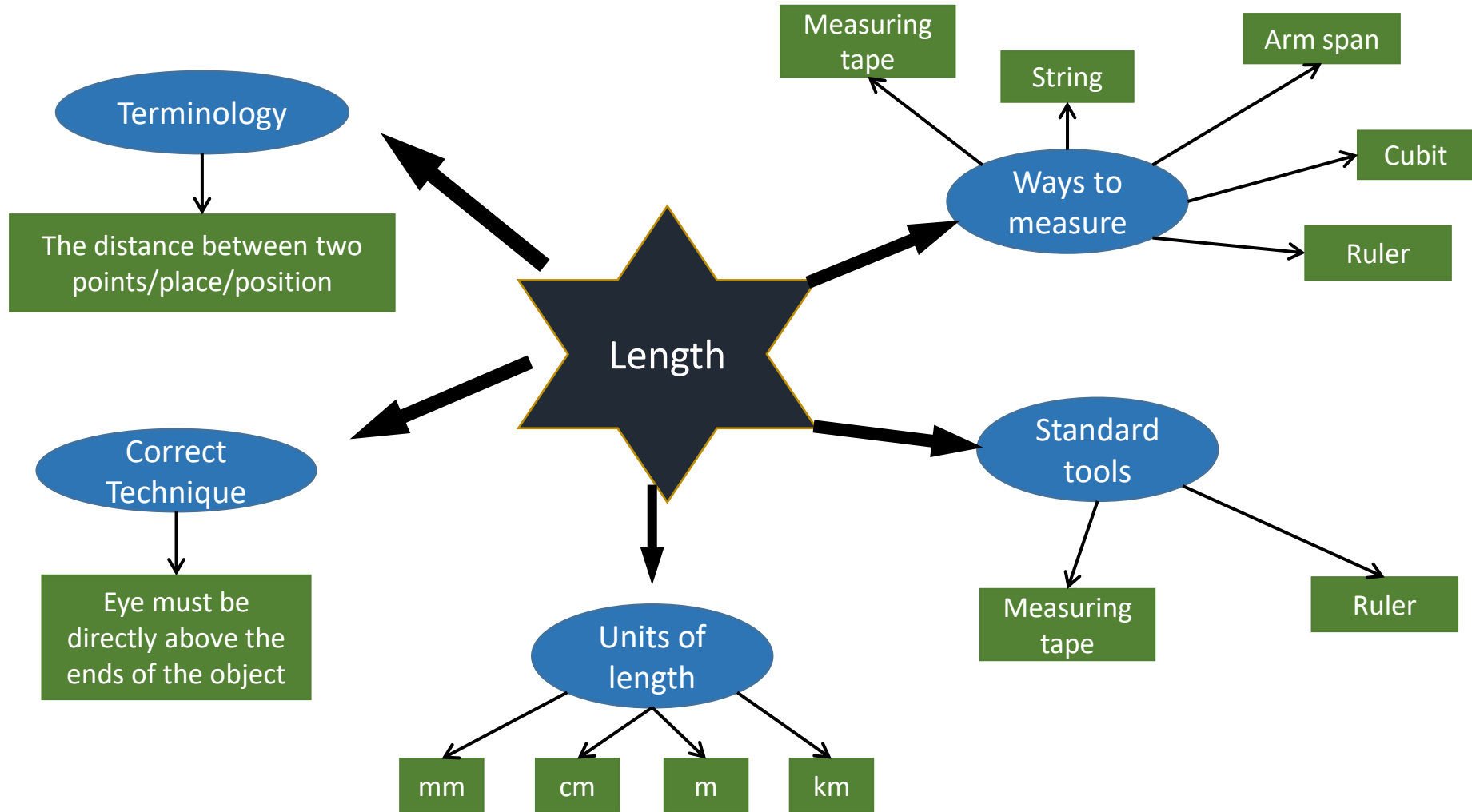


# LEARNING OUTCOMES

**Students are able to:**

- **Identify the objects which are measured by their length.**
- **Compare the objects having different lengths.**
- **Measure the lengths of different objects.**
- **Choose the appropriate measuring tools to measure length.**
- **Measure length using the correct technique.**
- **State the different unit for length.**
- **Convert one unit of length to another unit.**
- **Explain addition and subtraction of different length measurements.**
- **Solve the word problems based on length.**

# MIND MAP





**DAV PUBLIC SCHOOL, UNIT-VIII, BHUBANESWAR**  
**SUB-MATHEMATICS, CLASS-III**  
**CHAPTER-LENGTH**  
**WORKSHEET**

**Fill in:**

**Full Mark: 10**

1. \_\_\_\_\_ is the best unit to measure the length of a twenty-rupee note (1 mark)

**Answer the following:**

2. Convert the difference of 35 km and 18 km into metres (2 marks)
3. The shopkeeper bought 53 m 79 cm of cloth. He found that 1600 cm of cloth was damaged. What length of cloth was in good condition ? (3 marks)
4. Reema bought 30 m 75 cm cloth from a shop. She used 15 m 45 cm cloth for making curtains and 10 m 76 cm cloth for making uniform. How much cloth is left with her? (4 marks)

\*\*\*\*\*



## Marking scheme

Ques. no.	Value points	Marks allotted
1	Centimetre (cm)	1
2	Difference = 35 km – 18 km = 17 km 1 km = 1000 m 17 km = 17 x 1000 m = 17000 m	0.5 0.5 0.5 0.5
3	Length of cloth a shopkeeper = 53 m 79 cm length of cloth damaged = 1600 cm 1600 cm = 16 m length of cloth in good condition = <div style="text-align: right; margin-right: 50px;">             m      cm              53     79              - 16    00              -----              37 m    79 cm              -----           </div> Answer: 37 m 79 cm of cloth was in good condition.	statement 0.5 0.5          1  0.5 + 0.5

Contd...



### Marking scheme (Continued)

4

Length of cloth Reema bought = 30 m 75 cm

length of cloth used for making curtains = 15 m 45 cm

length of cloth used for making uniform = 10 m 76 cm

Total length of cloth used =

$$\begin{array}{r} \text{m} \quad \text{cm} \\ 15 \quad 45 \\ + 10 \quad 76 \\ \hline 26 \text{ m} \quad 21 \text{ cm} \\ \hline \end{array}$$

Length of cloth left =

$$\begin{array}{r} \text{m} \quad \text{cm} \\ 30 \quad 75 \\ + 26 \quad 21 \\ \hline 04 \text{ m} \quad 54 \text{ cm} \\ \hline \end{array}$$

Answer: 4 m 54 cm cloth is left with Reema

statement 1

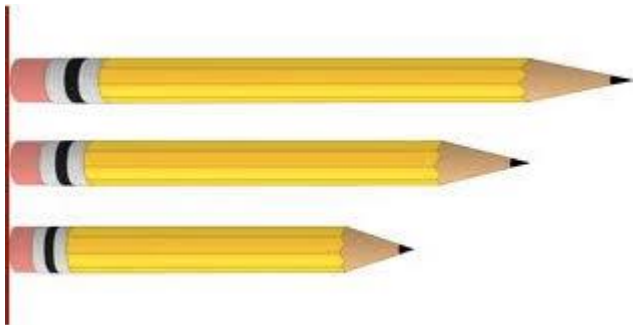
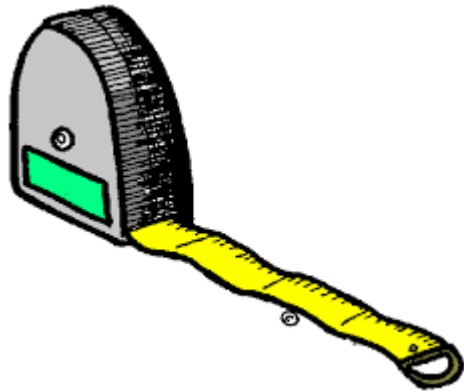
0.5

0.5 + 0.5

0.5

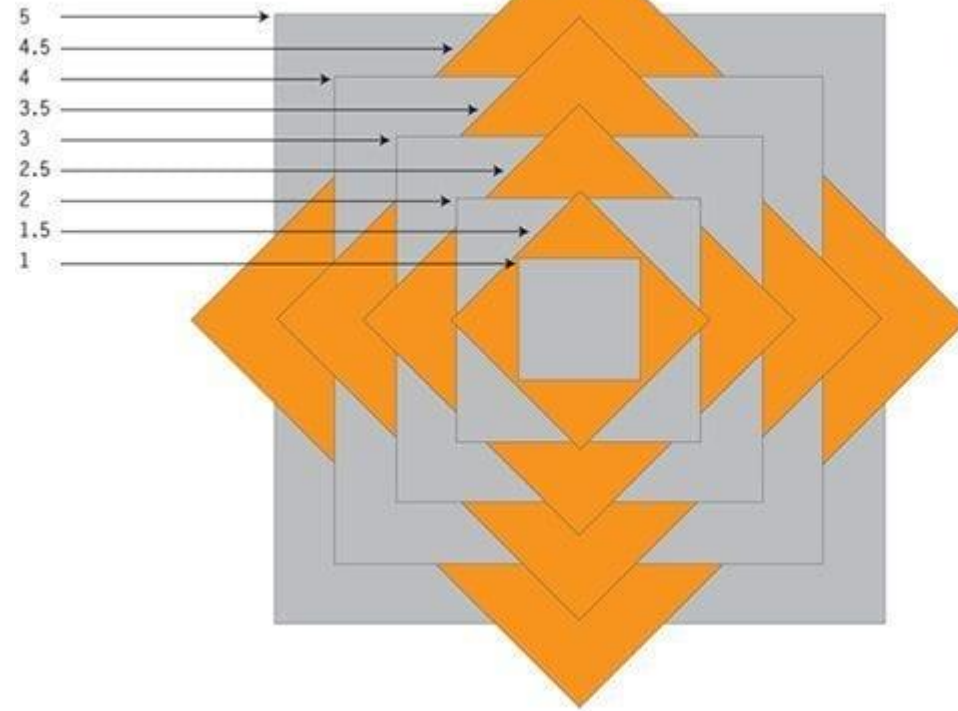
0.5 + 0.5





## Stacking Squares

measurement art



# THANK YOU