Measurement of Length

Understanding the Topic

Length tells us how long, tall, or wide something is. It is one of the basic measurements we use in daily life.

Units of Length

- Millimetre (mm) – Smallest unit used to measure very tiny things like thickness of a coin.

- Centimetre (cm) – Used for small lengths like pencil or notebook.

- Metre (m) – Used for medium distances like height of a person or door.

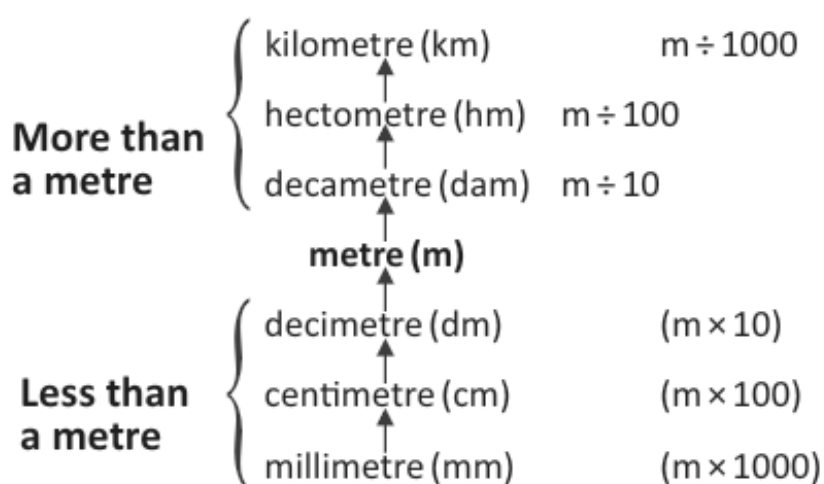- Kilometre (km) – Used for long distances like distance between cities.

Conversion of Units

- 10 mm = 1 cm

- 100 cm = 1 m

- 1000 m = 1 km

To convert smaller units to bigger units, we divide.

To convert bigger units to smaller units, we multiply.

Relating metre to other units

More than a metre	kilometre (km)	$m \div 1000$
	hectometre (hm)	$m \div 100$
	decametre (dam)	$m \div 10$
	metre (m)	
Less than a metre	decimetre (dm)	$(m \times 10)$
	centimetre (cm)	$(m \times 100)$
	millimetre (mm)	$(m \times 1000)$

Examples with Solutions

1. Conversion (Easy)

Question: Convert 300 cm into metres

Solution: 300 ÷ 100 = 3 m

2. Addition of Lengths (Moderate)

Question: Add 2 m 45 cm and 1 m 60 cm

Solution:

45 + 60 = 105 cm = 1 m 5 cm

2 + 1 + 1 = 4 m 5 cm

3. Word Problem (Moderate)

Question: A rope is 5 m long Another rope is 250 cm long What is their total length in metres

Solution: 250 ÷ 100 = 2.5 m

5 + 2.5 = 7.5 m

4. Subtraction (Easy)

Question: Subtract 1 m 25 cm from 3 m

Solution: 3 m = 300 cm

1 m 25 cm = 125 cm

300 – 125 = 175 cm = 1 m 75 cm

5. Real-life Situation (Moderate)

Question: The distance from school to Ravi's home is 3.2 km He travels back and forth every day How much distance does he travel in a day.

Solution: 3.2 km × 2 = 6.4 km

Summary Points

- Length measures how long or tall something is.
- Standard units include mm cm m and km.
- 10 mm = 1 cm 100 cm = 1 m 1000 m = 1 km.
- Use multiplication for converting bigger to smaller units.
- Use division for converting smaller to bigger units.
- Add or subtract lengths only after converting to the same unit.
- Used in real life for measuring cloth height distance etc.
- Helps in solving day-to-day measurement problems.
- Convert units carefully before solving.
- Always write the final answer with correct unit.