Measurement of Length

Introduction

Measures of length help us determine how long or short something is. In everyday life, we often need to measure length to know how far we need to travel, how big an object is, or how much material we need for a project. Common units of length include centimeters (cm), meters (m), and kilometers (km).

Why Learn About Length?

- It helps in measuring and comparing objects.
- Understanding length is essential for solving real-world problems.
- It builds a foundation for more advanced measurements in later grades.

Units of Measurement:

- Centimeter (cm): Used for small objects like a pencil, a book, or a notebook.
- Meter (m): Used for measuring medium-length objects such as a table, a room, or a door.
- Kilometer (km): Used for long distances like the length of a road, the distance between towns, or the length of a race.

Examples with Solutions:

Example: Choosing the Right Unit

> What is the best unit to measure the length of a school bus?

✓ A school bus is much longer than most small objects, so using meters (m) is the most appropriate. A bus might be around 10 meters long.

Example: Converting Meters to Centimeters

> Convert 5 meters into centimeters.

- ✓ 1 meter = 100 centimeters.
- ✓ 5 meters = $5 \times 100 = 500$ centimeters.

Example: Comparing Lengths

- > Which is longer: a 2 m stick or a 150 cm stick?
- ✓ Convert 2 meters to centimeters.
- ✓ 2 meters = 2 × 100 = 200 cm.

Since 200 cm is greater than 150 cm, the 2 m stick is longer.

Example: Adding Lengths

- A piece of ribbon is 2 m long, and another piece is 50 cm long. What is the total length in centimeters?
- ✓ 2 m = 2 × 100 = 200 cm
- ✓ Total length = 200 cm + 50 cm = 250 cm.
- 5. Example 5: Understanding Kilometers

> If your house is 3 km away from the school, how many meters is it?

- ✓ 1 kilometer = 1000 meters.
- ✓ 3 kilometers = 3 × 1000 = 3000 meters.

Key Points to Remember:

- Centimeter (cm): For small objects (notebooks, pencils).
- Meter (m): For medium-sized objects (tables, doors).
- Kilometer (km): For large distances (roads, cities).
- Conversions:
 - o 1 m = 100 cm
 - 1 km = 1000 m

By using these units and understanding how to switch between them, you can measure and compare lengths easily and accurately.