# **Multiplication and division in Measures of Length**

### **Understanding Notes**

- Sometimes we need to find total length of many same-sized items using multiplication
- We use division when a total length is divided into equal parts
- Main units used are meter (m) and centimeter (cm)
- 1 meter = 100 centimeters
- Convert all units to same unit before solving if needed
- Always write the final answer with proper units

## Example: (Easy – Multiplication in cm)

A ribbon is 25 cm long. What is the total length of 4 such ribbons?

• 25 × 4 = 100 cm

**Answer** = 100 cm

#### Example: (Easy – Division in m)

A rope of 8 m is cut into 4 equal pieces. What is the length of each piece?

• 8 ÷ 4 = 2

Each piece is 2 m

#### Example: (Moderate – Multiplication with m and cm)

One stick is 2 m 35 cm long. What is the total length of 3 such sticks?

- Multiply meters = 2 × 3 = 6 m
- Multiply centimeters = 35 × 3 = 105 cm
- 105 cm = 1 m 5 cm
- Add = 6 m + 1 m 5 cm = 7 m 5 cm

**Answer** = 7 m 5 cm

#### **Example: (Moderate – Division in cm with conversion)**

A rope is 300 cm long. It is cut into 5 equal pieces. Find the length of one piece

• 300 ÷ 5 = 60

Length of each piece = 60 cm

## **Example: (Moderate – Real-life division)**

A 6 m 60 cm wire is cut into 3 equal parts. What is the length of each part?

- Convert to cm = 6 m 60 cm = 600 + 60 = 660 cm
- 660 ÷ 3 = 220 cm
- Convert back = 200 cm + 20 cm = 2 m 20 cm

**Answer** = 2 m 20 cm

## **Summary Points**

- Use multiplication to find total of same lengths.
- Use division to split a length into equal parts.
- Always convert units if needed before solving.
- 100 cm = 1 m.
- Write answers clearly in m and cm form.