



Provincial Department Of Education – Sabaragamuwa
WEEKLY SCHOOL

Subject : Mathematics

Grade 7

Week : 14th of 2nd Term

Unit 16 – Length (2)

➤ **Multiplication of a measurement of length by a whole number**

- A ribbon of length 1 m 80 cm is required to decorate a present. Let us find the length of ribbon required to decorate 8 presents.

Method I

m	cm	
1	80	
×	8	
14	40	

$$80 \text{ cm} \times 8 = 640 \text{ cm}$$

Since $640 \text{ cm} = 6 \text{ m } 40 \text{ cm}$,
let us write the 40 cm in the centimetres
column and carry the 6 m to the metres
column.

$$1 \text{ m} \times 8 = 8 \text{ m.}$$

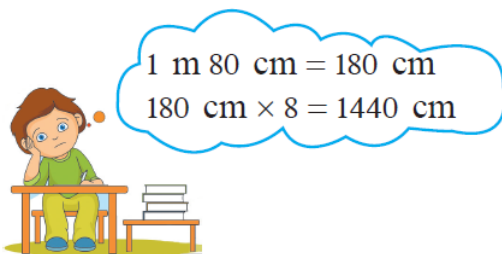
Let us add the 8 m to the 6 m.

$$8 \text{ m} + 6 \text{ m} = 14 \text{ m}$$

Let us write the 14 m, in the metres column.

Method II

Let us express 1 m 80 cm, in centimetres and then multiply by 8.



	cm
	180
×	8
	1440

Therefore the total length = 1440 cm = 14 m 40 cm

- Let us simplify $3 \text{ km } 175 \text{ m} \times 12$

Let us express 3 km 175 m, in metres and then multiply by 12.

$$3 \text{ km } 175 \text{ m} = 3175 \text{ m}$$

$$3175 \text{ m} \times 12 = 38 \text{ } 100 \text{ m}$$

$$38 \text{ } 100 \text{ m} = 38 \text{ km } 100 \text{ m}$$

$$\therefore 3 \text{ km } 175 \text{ m} \times 12 = 38 \text{ km } 100 \text{ m}$$

	3175
×	12
	6350
	3175
	38100

➤ **Division of a measurement of length by a whole number**

- Suppose we are given a wire of length 5 m 46 cm and cut it into 2 equal pieces.

Let us find the length of one piece.

Here we need to divide the length of the wire by 2.

Let us express 5 m 46 cm in centimetres and then divide by 2.



$$\begin{aligned} 5 \text{ m } 46 \text{ cm} &= 546 \text{ cm} \\ 546 \text{ cm} \div 2 &= 273 \text{ cm} \end{aligned}$$

$$273 \text{ cm} = 2 \text{ m } 73 \text{ cm}$$

So the length of one piece = 2 m 73 cm

$$\begin{array}{r} 273 \text{ cm} \\ 2 \overline{) 546 \text{ cm}} \\ \underline{4} \\ 14 \\ \underline{14} \\ 6 \\ \underline{6} \\ 0 \end{array}$$

Simplify 8 km 740 m \div 5.

Let us express 8 km 740 m in metres and then divide by 5.

$$8 \text{ km } 740 \text{ m} = 8740 \text{ m}$$

$$8740 \text{ m} \div 5 = 1748 \text{ m}$$

$$\begin{aligned} 8 \text{ km } 740 \text{ m} \div 5 &= 1748 \text{ m} \\ &= 1 \text{ km } 748 \text{ m} \end{aligned}$$

$$\begin{array}{r} 1748 \text{ m} \\ 5 \overline{) 8740 \text{ m}} \\ \underline{5} \\ 37 \\ \underline{35} \\ 24 \\ \underline{20} \\ 40 \\ \underline{40} \\ 00 \end{array}$$

Simplify 65 cm 7 mm \div 9.

Method I

Let us express 65 cm 7 mm, in millimetres and then divide by 9.

$$65 \text{ cm } 7 \text{ mm} = 657 \text{ mm}$$

$$\begin{aligned} 65 \text{ cm } 7 \text{ mm} \div 9 &= 73 \text{ mm} \\ &= 7 \text{ cm } 3 \text{ mm} \end{aligned}$$

$$\begin{array}{r} 73 \text{ mm} \\ 9 \overline{) 657 \text{ mm}} \\ \underline{63} \\ 27 \text{ mm} \\ \underline{27} \text{ mm} \\ 00 \end{array}$$

Method II

$$\begin{array}{r} 7 \text{ cm } 3 \text{ mm} \\ 9 \overline{) 65 \text{ cm } 7 \text{ mm}} \\ \underline{63} \\ 2 \rightarrow 20 \text{ mm} \\ \underline{27} \text{ mm} \\ 27 \text{ mm} \\ \underline{27} \text{ mm} \\ 00 \end{array}$$

$$65 \text{ cm } 7 \text{ mm} \div 9 = 7 \text{ cm } 3 \text{ mm}$$

Let us divide the 65 cm in the centimetres column by 9.

Let us take the remaining 2 cm, to the millimetres column as 20 mm and find the amount in the millimetres column.

$$20 \text{ mm} + 7 \text{ mm} = 27 \text{ mm}$$

$$27 \text{ mm} \div 9 = 3 \text{ mm}$$

➤ **Do all the exercises in your text book 16.3, 16.4**