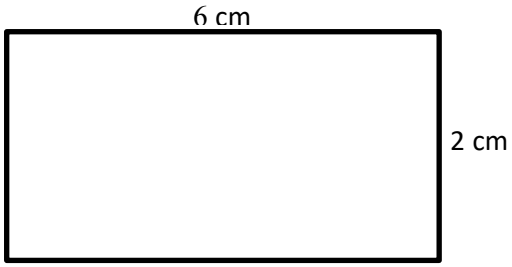
Unit 27 – Scale Diagrams (1)

➢ Scale Diagrams

Since the figure is drawn by increasing or decreasing all the measurements by a common ratio, the shape of the figure will be exactly the same as the original shape and only the size will be different. Figures drawn in this manner are called **scale diagrams**.

- Suppose you want to draw a scale diagram of a flower bed of length 6 m and breadth 2 m in your book. You need to first select a suitable scale.
- Suppose 1 cm in the scale diagram represents a length of 1 m of the flower bed.
- Since 1 m equals 100 cm, a length of 1 cm in the scale diagram represents 100 cm of actual length. As the same unit has been used, this can be expressed as a ratio as 1:100. This ratio is considered as **the scale** of the scale diagram.



Scale 1 : 100

- The scale written as 1:100 in the figure expresses the fact that an actual length of 100 cm is represented by 1 cm in the scale diagram.

➢ How to express a scale as a Ratio

01. Express as a ratio, the scale of a scale diagram where 200 cm is represented by 1cm.

1 cm ⟶ 200 cm

1 : 200

02. Express as a ratio, the scale of ascale diagram where 5 m is represented by 1cm.

1 cm ⟶ 5 m

1 cm ⟶ 500 cm

1 : 500

03. Express as a ratio, the scale of a scale diagram where 5 mm is represented by 1cm.

1 cm 5 mm

10 mm 5 mm

10 : 5

2 : 1

➢ Do all the exercises in exercise 27.1 in your text book.