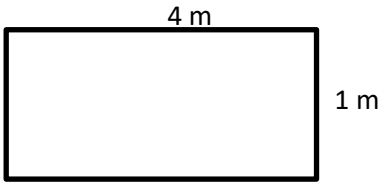
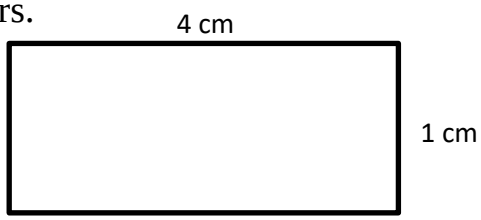
Unit 27 – Scale Diagrams (2)

➢ Drawing scale diagrams

- Let us draw a scale diagram of the blackboard in the classroom.
  - The blackboard is rectangular in shape.
  - Its length is 4 m and its breadth is 1 m.
  - Let us consider that 1 m is represented by 1 cm as the scale. That means the scale is 1:100.
  - So the scale diagram should be a rectangle of length 4 cm and breadth 1 cm.
  - Let us mark the measurements in a sketch.



- Follow the given steps to draw the scale diagram with this length and breadth.
  - Draw a straight line segment of length 4 cm using the ruler and the pencil.
  - Draw two perpendiculars of length 1 cm each at the two ends of the straight line segment using the set square as shown in the figure.
  - Complete the rectangle by joining the end points of the two perpendiculars.



1 : 400

➢ Obtaining actual measurements from scale diagrams

- A scale diagram of a land drawn to the scale 1:500 is shown in the figure. Let us find;

(i) the actual length of the land, (ii) the actual width of the land,
(iii) the actual area of the land.

The scale 1:500 indicates that 500 cm or 5m of the actual length of the land is represented by 1 cm in the scale diagram. Therefore;

(i) the actual length of the land $= 6 \times 5\,m = 30\,m$
(ii) the actual width of the land $= 2 \times 5\,m = 10\,m$
(iii) the actual area of the land $= length \times width = 30 \times 10\,m^2 = 300\,m^2$

➢ Do all the exercises in exercise 27.2 and 27.3 in your text book.