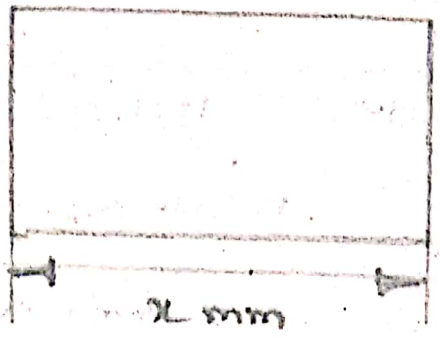
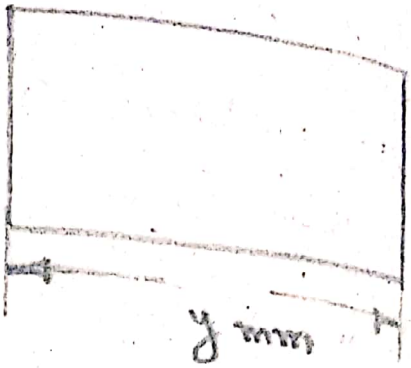


Aligned Dimensioning



Un directional Dimensioning

LETTERING

The art of writing the alphabets A, B, C ... Z and numbers such as 1, 2, 3 ... 0 etc is known as lettering.

Sizes of Lettering

Main title	10mm or 7mm. (Height)	5mm (width)
Subtitile	7mm or 5mm (Height)	5mm (width)
note, dimension		

Space between two words $\frac{1}{5}$th of Height.

Space between two letters $\frac{3}{5}$th of Height.

Single Stroke lettering —

The lettering in which we complete the text without lifting the pencil.

Gothic lettering

The lettering in which all the alphabets are uniform width or thickness is known as Gothic lettering.

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SCALES

The proportion by which we either reduce or increase the actual size of the object on a drawing is known as drawing to scale.

Size of Scale:-

1) Full size scale
2) Reducing scale
3) Enlarging scale.

Full size scale

The scale in which the actual measurements of the object are drawn to same size on the drawing.

eg 1:1 (drawing made to actual size)

Reducing Scale

The scale in which the actual measurements of the object are reduced to some proportion is known as Reducing scale.

eg 1:2
1:5
1:10

Enlarging Scale

The scale in which the actual measurements of the object are increased some proportion.

eg 2:1
5:1
10:1

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Representative Fraction (RF)

The ratio of the distance on the drawing sheet of an object to the corresponding actual distance of the object.

$$RF = \frac{\text{Drawing size}}{\text{Actual size}} \quad \text{(en same unit)}$$

Classification of Scale

- Plain Scales
- Diagonal Scales
- Vernier Scales
- Chord Scales.
- Comparative Scale.

Plain scale

The scale in which we can measure upto any two consecutive units is known as Plain Scale.

Diagonal Scale

The scale in which we can measure upto any three consecutive units is known as diagonal Scale.

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Q/ Construct a Plain Scale to show kilometres and hectometres, when 2.5 cm are equal to 1 km, and long enough to measure upto 6 km. Find the RF and indicate a distance 4 km and 5 HM on the scale.

Soln Units - Kilometres, hectometres

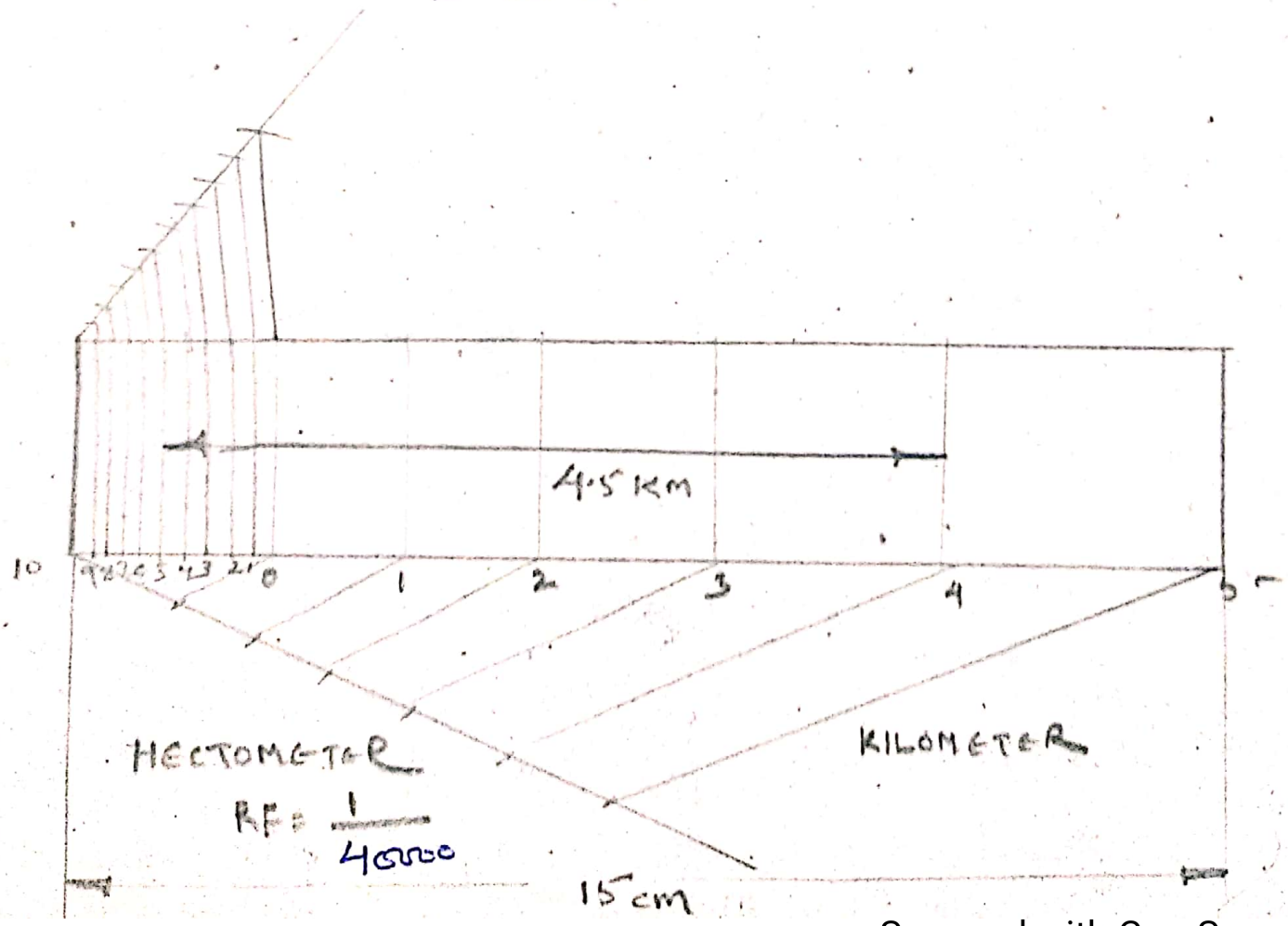
$$RF = \frac{2.5\text{ cm}}{1\text{ km}} = \frac{2.5}{100000} = \frac{1}{40000}$$

Max length = 6 km

Length of Scale = RF × Max length

$$= \frac{2.5}{100000} \times 6 \times 100000\text{ cm}$$

$$= 15\text{ cm}$$



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Q. Construct a diagonal scale of 1:5000 to show meters and long enough to measure upto 600 mts. Show a distance of 457 mts on the scale.

Soln

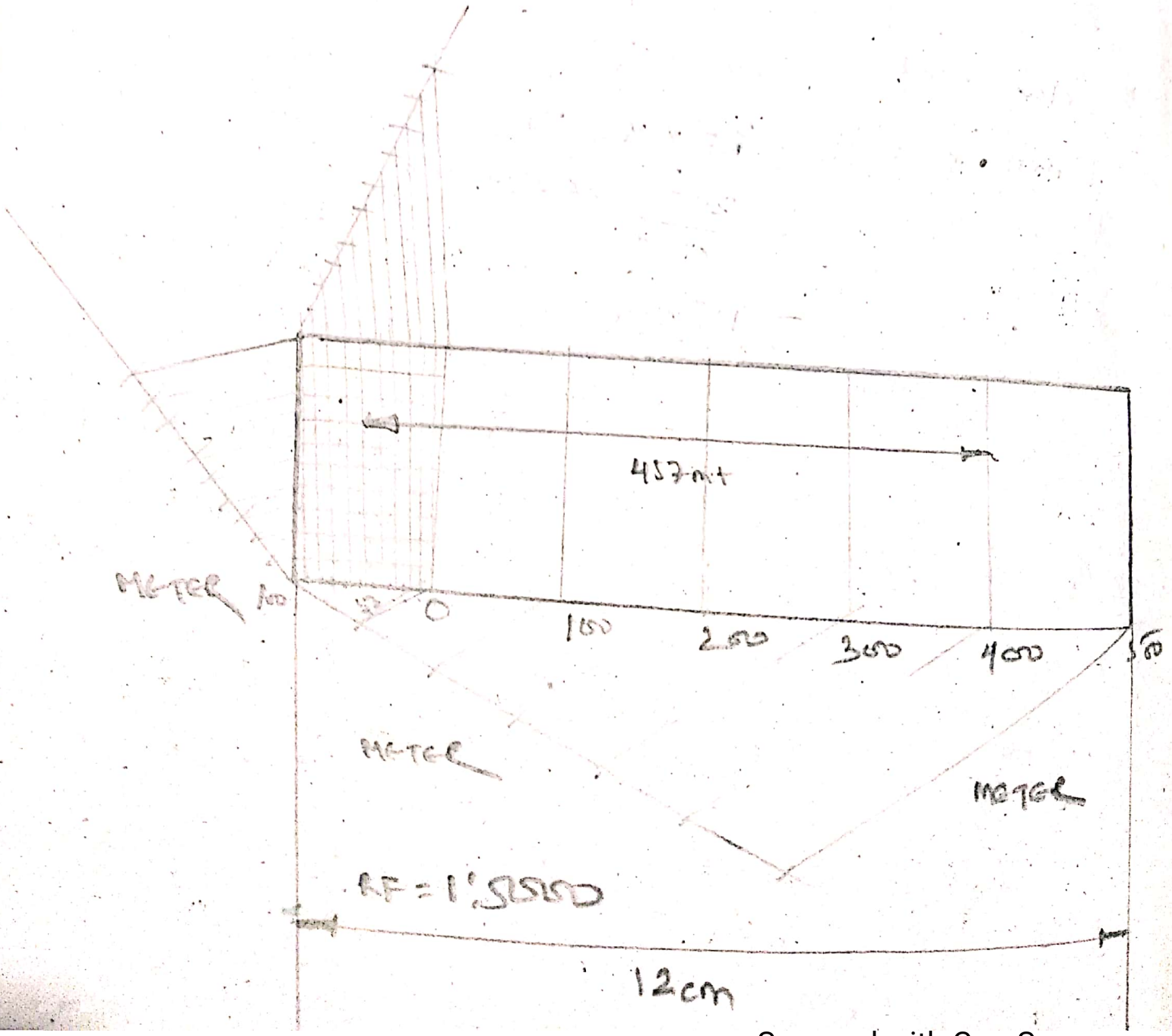
Units = Meters

RF = 1/5000

Max length = 600 mt

Length of Scale = $\frac{1}{5000} \times 60000$ cm

= 12 cm.



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Be friendly with these units

1 Kilometer = 10 Hectometer

1 Hectometer = 10 Decameter

1 Decameter = 10 meter

1 meter = 10 Decimeter

1 Decimeter = 10 Centimeter

1 Centimeter = 10 Milimeter

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