

**Laxmi Narain Dubey College, Motihari**

(a constituent unit of B.R.A. Bihar University, Muz.)

NAAC Accredited 'B+'

**National Cadet Corps (NCC)**

**Topic: Scales and Grid System**

**NCC – Map Reading**

**B/C Certificate Examination**

**Instructor**

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## MR2: Scales and Grid Systems

### Definition of scale

So, Scale is the proportion which the distance between the two points on the map bears to the distance between two points on the ground.

The essence of a map is that it is a drawing to scale and it bears a definite ratio to the size of the actual country which it portrays.

## Methods of Expressing a Scale

6. There are two methods of expressing a Scale :-

(a) In words. 1 inch to 1 mile, it means that 1 inch on the map represents 1 mile on the ground.

(b) As a representative fraction. This is the scale expressed in the form of a fraction, if the scale of a map is given as  $1/100000$  it means that 1 cm on the map represents 100000 cm on the ground.

### Scale Line

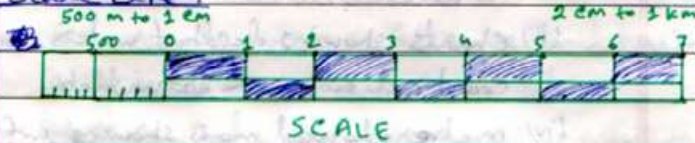


Fig-1

7. Fig-1 is the scale line which is drawn in two ways and by means of this, distance on the map can be measured.

8. The large divisions on these scale lines are called 'Primaries' and the small divisions on the left 'Secondaries'.

9. On the 2 cm to 1 km map one shows 1 km along its length.

### Grid-Definition

10. A map is covered with a network of

Parallel lines, some running North and South and others West and East. These form a series of small squares all over the map. These lines are known as 'Grid lines'.

11. The purpose of Grid lines is to make possible giving and reading 'Grid References' and to facilitate measurement of bearings.

### Method of Grid References

12. In giving a Grid Reference there are four rules to remember :-

- (a) A reference must always contain an even number of figures. Normally it contains six figures.
- (b) Always count along the EASTING lines first from the WEST to EAST and then from SOUTH to NORTH along NORTHINGS.
- (c) For six figure Grid Reference the third and the sixth figure represents the divisions of 1000 meters square to the nearest  $10^2$  part, so they have to be estimated.
- (d) If a general Grid Reference is to be given and there is only one such object in one square e.g. bridge, temple, road junction then its identity and four figure Grid Reference would suffice.