STRAND 4: GEOMETRY
Scale Drawing

Introduction to Scale Drawing

The Scale

- Scale is a ratio that represents the relationship between the dimensions of a model and the corresponding dimensions on the actual figure or object.

The figure below shows the relative positions of Mombasa, Nairobi and Nakuru. The distance between Mombasa and Nairobi on a straight line is 450 km and that between Nairobi and Nakuru is 142 km.

(i). Measure in centimetres the distance between:

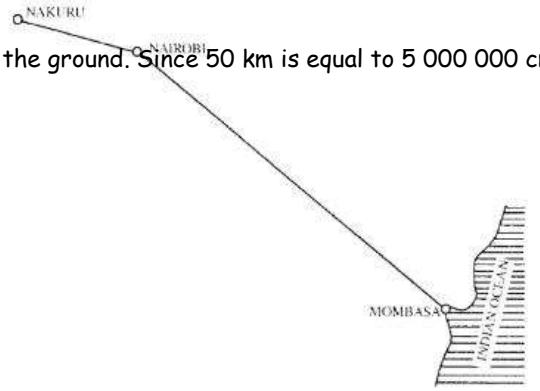
42. Mombasa and Nairobi.

43. Nairobi and Nakuru.

(ii). How many kilometres does 1 cm represent between:

20. Mombasa and Nairobi?

21. Nairobi and Nakuru?



You should notice that I cm on the map represents 50 km on the ground. Since 50 km is equal to 5 000 000 cm, this statement can be written in ratio form as 1: 5 000 000.

As a representative fraction (R.F.), 1: 5000 000 is written as $\frac{1}{5,000,000}$

- The ratio of the distance on a map to the actual distance on the ground is called ***the scale of the map.***

Example;

(1). The scale of a map is given in a statement as '1 cm represents 4 km.' Convert this ratio form.

Solution