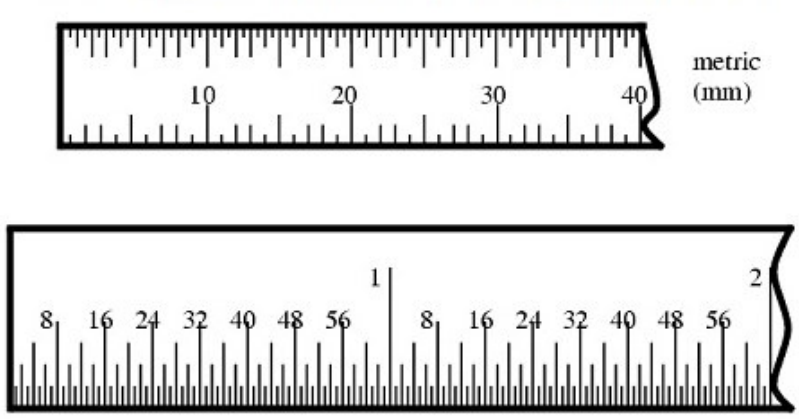
CLASS IX (PHYSICS)

CHAPTER 1 (B): MEAUREMENT OF LENGTH

LEAST COUNT OF A MEASUREMENT:

The least count of an instrument is the smallest measurement that can be taken accurately with it.



Smaller the least count of an instrument, more precise is the measurement made by using it.

PRICIPLE OF VERNIER:

A measuring instrument consisting of an L-shaped frame with a linear scale along its longer arm and an L-shaped sliding attachment with a **vernier**, used to read directly the dimension of an object represented by the separation between the inner or outer edges of the two shorter arms.

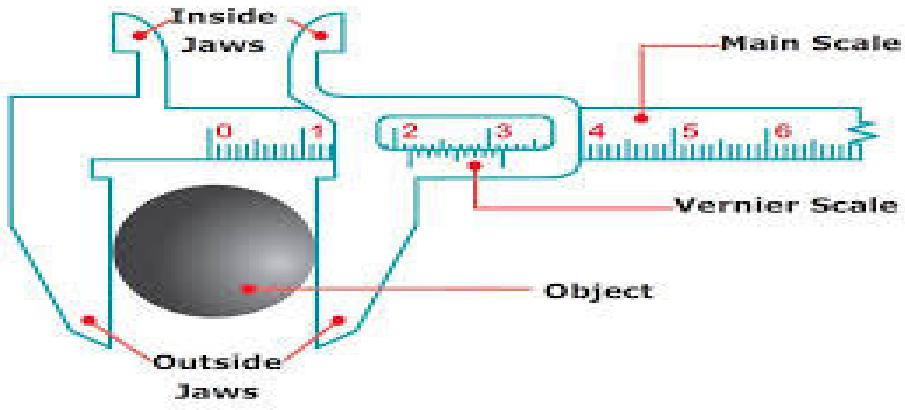


Figure 2: Vernier Caliper

Vernier calliper mail parts and their function:

Part	Function
Outside jaws	To measure the length of the rod , diameter of the sphere, external diameter of the hollow cylinder.
Inside jaws	To measure the internal diameter of the hollow cylinder or pipe.
Strip	To measure the depth of the beaker or a bottle.
Main scale	To measure length correct up to 1 mm.
Vernier Scale	Helps to measure length correct up to 0.1 mm

Least count of vernier or vernier constant:

L.C = Value of 1 main scale division – value of 1 vernier scale division

Or

$$\text{L.C} = \frac{\text{Value of one main scale division (x)}}{\text{Total no of divisions on vernier scale (n)}}$$

ASSIGNMENT

Exercise 1(B)

Question No. 1, 3, 5, 7, 8, 9 and 13

Numerical: 1 and 2