

CHAPTER-5

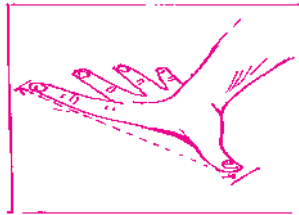
MEASUREMENT

Measurement of length by using non standard units

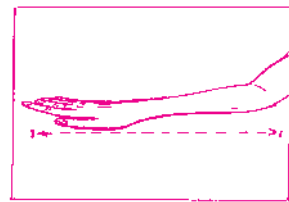
Earlier man measured lengths with different parts of the body such as fingers (*Khutsa*), hand span, cubits, fathom, foot pace, *Hui* (local name) as unit of length. Such types of units are considered as non standard units.



Fingers
(*Khutsa*)



Hui



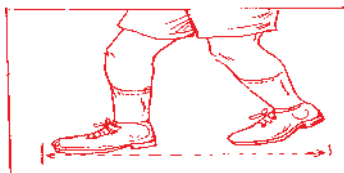
Cubit
(*Khudup*)



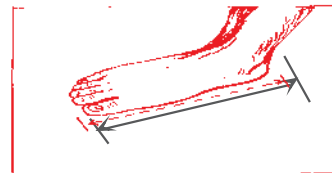
Fathom (*lam*)



Hand-span (*Khubang*)



Pace (*Khongkap*)



Foot (*Khongpak*)

MEASUREMENT OF ENVIRONMENTAL OBJECTS

Measure the length of
a chalk stick by fingers.
This chalk stick is 4 fingers long.



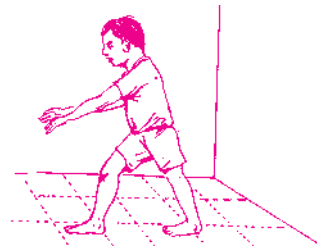
Measure the length of
the teacher's table by hand span
The table is 15 spans long.



Measure the length of the
black board by cubit.
The black board is 8 cubits long.



Measure the length of
your class room by pace.
The room is 20 paces long.



Measure the length of
a mat by foot.
The mat is 13 feet long.



Activity

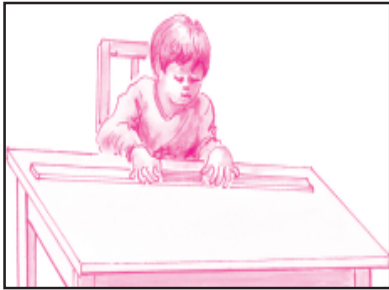
Measure

1. the length of your mathematics book by fingers,
2. the length of a room by fathom,
3. the length of a carpet by feet,
4. the length of an exercise book by Hui,
5. the length of a bench by Hand span,
6. the height of a door of your class room by cubit.



MEASUREMENT WITH A ROD, PEN AND PENCIL, ETC.

We may also measure the length of an object by using a rod, pen and pencil, etc.



A boy measures the length of an iron rod as four rods



A girl measures the length of another iron rod as five rods



A boy measures the length of an iron rod as four pencils



A girl measures the length of the same iron rod as four pencils

MEASUREMENT OF MASS (WEIGHT)

A duster is heavier than a marker pen.



A brinjal is lighter than a cabbage.



A pumkin is heavier than a tomato.



An apple is lighter than a pineapple

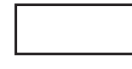
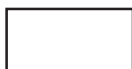
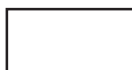
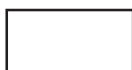
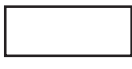
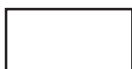
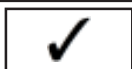


An apple and an orange are of the same weight.



Activity

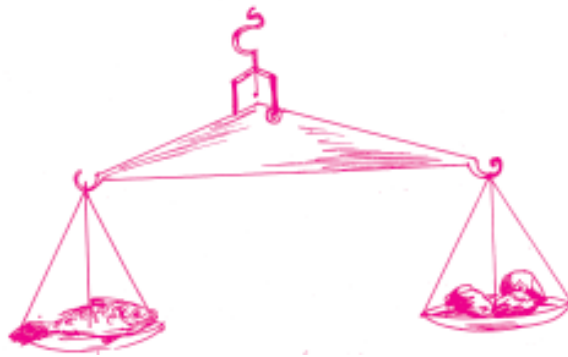
Cross (✕) the heavier object and tick (✓) the lighter object.



COMPARISON OF WEIGHTS OF TWO BODIES BY USING STONE



Weight of the apple is 2 stones.



Weight of the fish is 3 stones.

MEASUREMENT OF WEIGHT BY STONES



Weight of the pineapple is 3 stones

MEASUREMENT OF WEIGHT BY BEADS



Weight of the lemon is 5 beads

CAPACITY

Look the vessels shown below :



Substances like water, milk, oil, petrol, etc. are called liquids. All the above vessels can be used to collect liquids.



Which of the two vessels (Jug or mug) can hold more water? The jug can hold more water than the cup (by simple observation)

Activity 1

Take a jug and a mug. Fill the jug with water. Now pour water from the jug into the mug, till the glass is full. But there is still water left in the jug. Obviously, the jug can hold more water than the mug. We say that the capacity of the jug is more than the capacity of the mug.

Note : *The amount of water contained in the jug or cup is a measure of the capacity of the jug or mug.*

Activity 2



Which of the two vessels hold more water?

We cannot say by simple observation.

Let us now fill these two vessels with water by using a jug.

The bucket can be filled by 3 jugs of water.

The earthen pot can be filled by 3 jugs of water.

We say that capacities of the bucket and earthen pot are the same.

Activity 3



The bucket is filled by 8 mugs of water.

The milkcan is filled by 12 mugs of water.

Which of the two vessels can hold more water ?

Here, the capacity of the milkcan is more than the capacity of the bucket.

COMPARE

You can observe the capacities of the following:

- 1 a cup and a mug



2. a mug and a jug



3. a bucket and a tub



4. a tub and a milkcan



5. a bucket and an earthen pot



You can measure the capacities of the following vessels by a mug:

1. a jug



2. a tub



3. a bucket



4. An earthen pot



NON STANDARD UNITS OF MEASURING CAPACITY

Traditionally, we use *Sangbai*, *Leekhai*, *Laitang* to measure the quantity of *paddy*, *potato*, *chilli* ... etc ..

