Data Handling

Data:

- Data refers to any information collected in the form of numerical figures
- Data handling deals with collecting data, analysing, presenting it and drawing inferences from it
- Data collected is represented through tables and graphs for better understanding and interpretation
- The difference between the highest and lowest observations in a given data is called its Range.

Subject	Tally Marks	Number of Students
Art	𝍸 ||	7
Mathematics	𝍸	5
Science	𝍸 |	6
English	||||	4

- The number of tallies before each subject gives the number of students who like that particular subject.
- This is known as the frequency of that subject; number of times an observation occurs(repeats) in the data

Representative Values : Measures of central tendency

- Mean (arithmetic mean)
- Median
- Mode

Mode of a set of observations is the observation that occurs most often.

Median refers to the value which lies in the middle of the data (when arranged in an increasing or decreasing order) with half of the observations above it and the other half below it.

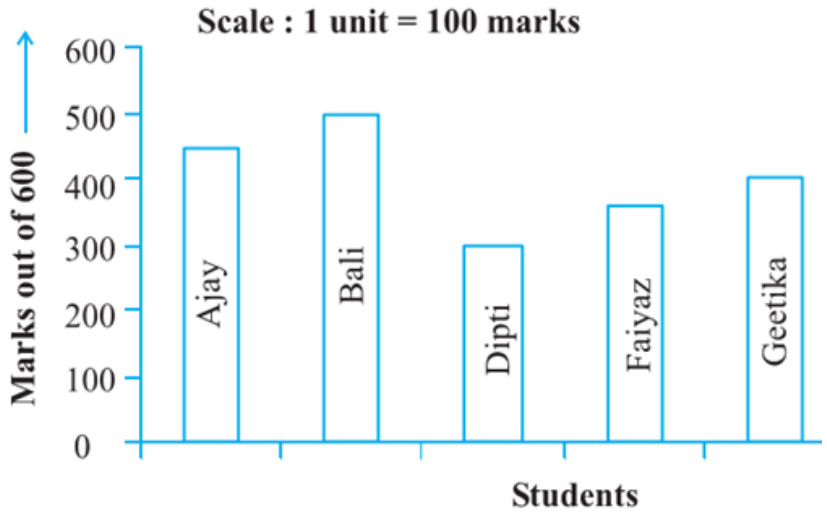
If the number of observations is odd, the middle most value is the median.

If the number of observations is even, the median is given by finding the average or mean of the two middle most observations

Bar Graph

Representation of the data in the form of rectangles (bars) of uniform width where. the lengths of the bars depend upon the frequency and the scale that is chosen

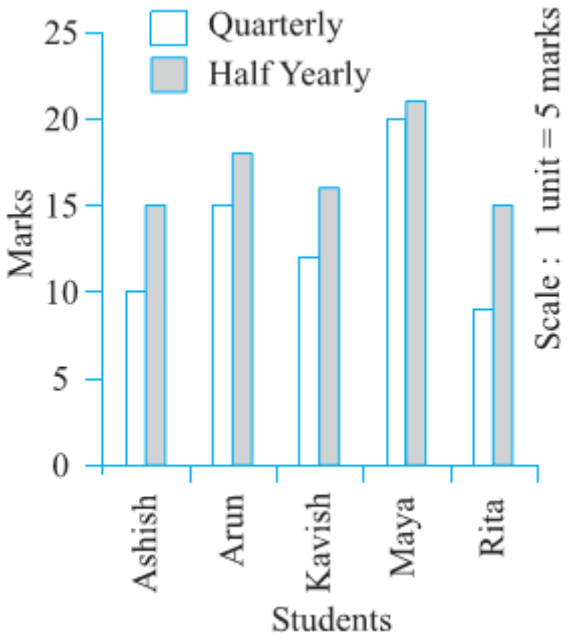
Following bar graph represents the total marks (out of 600) obtained by five children of a particular class



Double bar graphs

Help to compare two collections of data simultaneously

Double Bar graph below shows marks of students in the quarterly (unshaded bars) and half yearly (shaded bars) exams.



Chance and Probability

- Probability of an event measures the **chance** of occurrence or non-occurrence of that event
- Some situations (events) in our life are certain to happen, some are impossible and some may or may not happen.
- The situations that may or may not happen have a chance of happening. They have a probability between 0 and 1.
- Those which have no chance of happening have probability 0 and those that are bound to happen have probability 1

- Probability of an event = , when

  the outcomes are equally likely.

- Tossing a coin : Head (H), Tail (T) are two possible outcomes
- Rolling a die : 6 possible outcomes : 1, 2, 3, 4, 5 , 6