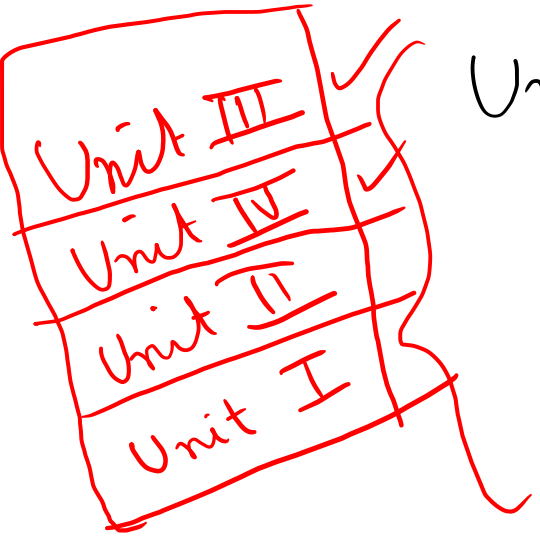
MAT 132 - Probability & Statistics.



Unit I – Probability

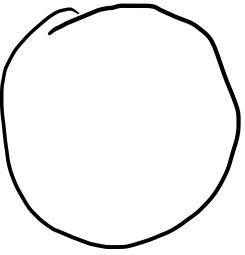
II, III, IV → Statistics.

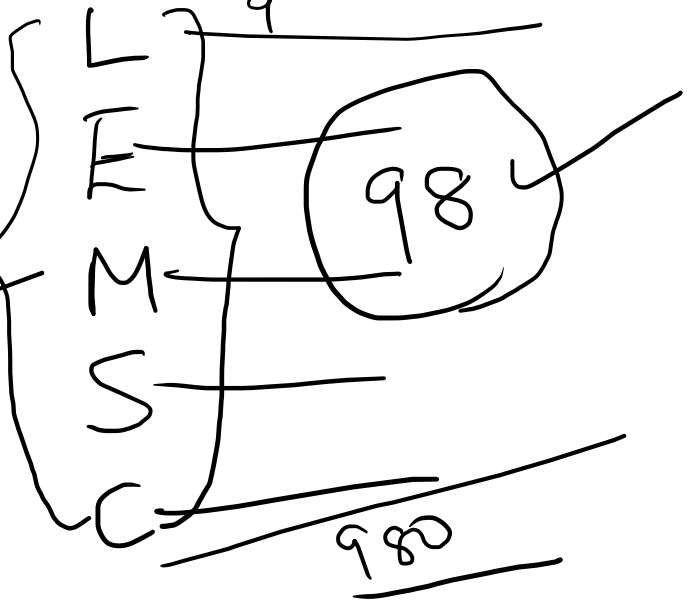
- II → Collection of data & Tabulation.
- III → Computational aspects
- IV → Sampling Techniques

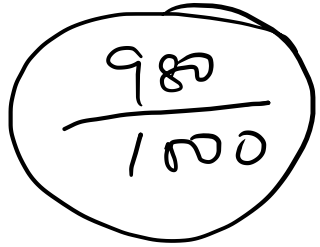
Central tendency

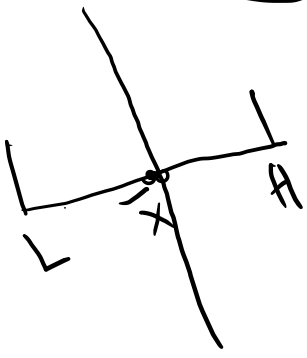
I have scored 98% in HSC.

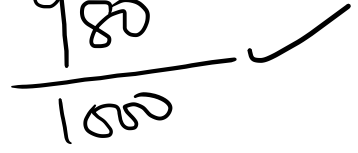
⇒ out of 100 I have obtained 98 marks.











Middle value.

68, 69, 70, 71, 72

Median.

1) Arithmetic mean.
2) Median
3) Mode
4) Geometric mean

5) Harmonic mean.

Averages are statistical Constants which enable us to comprehend in a single effort the significance of the whole.

Requisites for an ideal measure:

1) Rigidly defined
2) readily Comprehensible & easy to calculate.
3) It is based on all the observations.

Classification of data

1) Individual observations
2) Discrete observations.
3) Continuous observations.

30, 35, 37, 30, 43, 46

x :	30	35	37	43	46
f :	2	1	1	1	1

Class interval	
30 - 35	3 (including 35)
35 - 40	1
40 - 45	1
45 - 50	1
	6

Class interval	
30 - 35	2 (included 35)
35 - 40	2
40 - 45	1
45 - 50	1

Average ($\bar{X}$ → mean)

Individual observations: $\bar{X} = \frac{\sum x}{n}$

Discrete observations: $\bar{X} = \frac{\sum fx}{\sum f}$ → frequency

Continuous observations: $\bar{X} = A + \frac{\sum fd}{\sum f} \times i$

- A → assumed mean
- i → length of the C.I.
- $d = \frac{m - A}{i}$, m → mid value of C.I.