MARUDHAR KESARI JAIN COLLEGE FOR WOMEN, VANIYAMBADI PG & RESEARCH DEPARTMENT OF MATHEMATICS

CLASS : I BCA

SUBJECT CODE: STATISTICAL METHODS AND IT APPLICATIONS I

SUBJECT NAME: 23UECA12A

SYLLABUS

UNIT-III

Measures of dispersion: Range, Quartile deviation, mean deviation, Standard deviation, combined Standard deviation and their relative measures.

MEASURES OF DISPERSION UNIT-05

population:

Mariation of the item of the measurement of the scatterness of the mass of figures in a series about an average Dispersion is the measures of the Jalled measured of variation or

properties of a good measures of variation characteristics:

It should be simple to understand It should be rigidly idefined and easy to commute.

It should be based on all

observations.

It should be amendable to further ralgebraic treatment.

It should not be cappected by Extreme It must have compiling stability observation

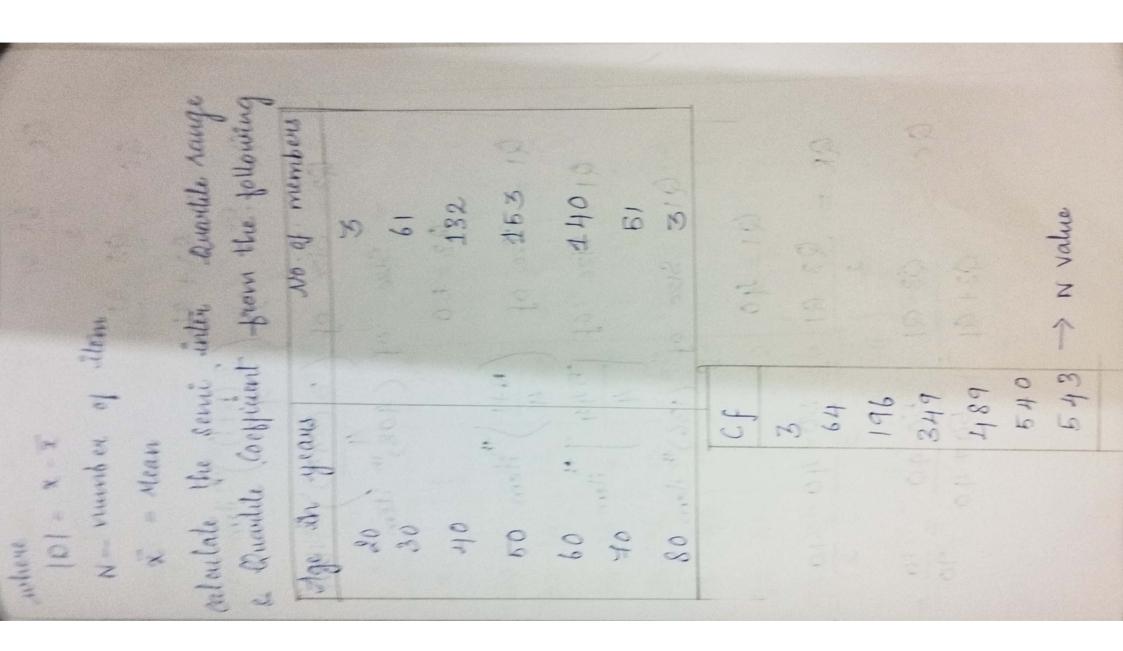
The range is the simplest measure of measure odepends upon the extreme item a rough mas we. It Range = Langest Value - Smallest value and not on all the item. Coefficient of range = 1-5 O'le persion. (i.e) R=1-5 2. Inter quantitic Range 5 Loventz Deviation Slandard Deviation measuring 3. Mean Deviation Da peullon. II. is 4 Range Methods of

Deviotion is an absolute the range, well and of townships 43+27 - 6.228 \$ dispersion the relative measure of Dispersion Known as - 43-27 = 16 31, 80, 35, 36, 38, 40, 45 93-91 93+01 03-01 1-3 quostile Deviction Range = L-S Rouge = Coefficient of 40 = Quartile Deviation = quartile Deviation Montide Coefficient of measure of wefrient print f

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of monthly carn of monthly carn of monthly carn of particles in Deviation = 9	and and the	country	250	257	264	2,60	198	262	643	8-21	d	
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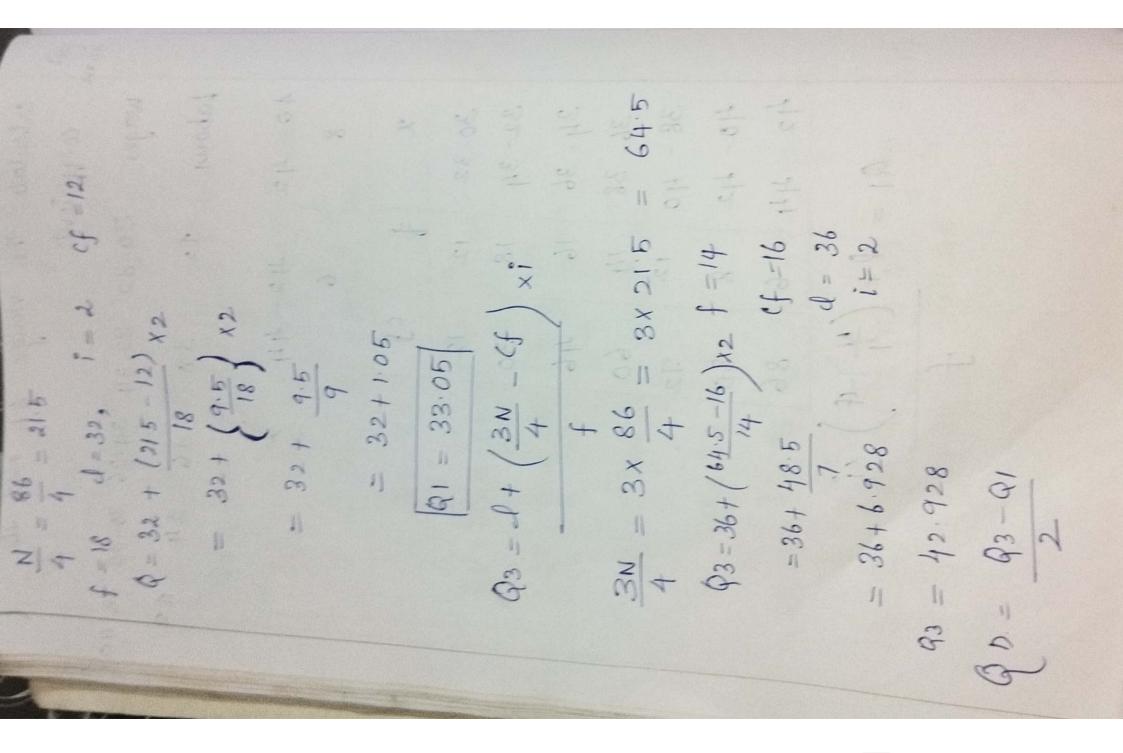
5 51 0 93-01 25 5 17.7 10 3 6.3 11

Laken of the scatter is in Arit AM which coefficient of MD = mean (or) median (or) made The relation M.D or Coefficient of M.D is obtained by dividing the knean derivation by the coverage wied for calculating MD Mean Deviation is the caurage account for the facts that measure is 5 Mean Deviation [or] Fretage Deviation amount of seather of the items a distribution. From the Either fream of the median involving signs of the deviation. The tweage Coefficient of Mean Deviation 1012 = 0.M 5/10/ .. Mean Deviation = _N called mean chariation. Mean Deviation (Individual yormula: Definition.



10 136)th item (644) 408) 544 1+7 7 3 fo 0 Q3-Q1 63+01 93=50 3 Q1 = Size 03-01 3

calculate the range GD and No.	2 32.34 34-36	12 18 16 14	40-42 44	2 3	30-32 12 12 30 12 30 15.	34-36 16 46	77	08.	42-44 60 80 $12-44$ 12 12 12 12 12 12 12 12	
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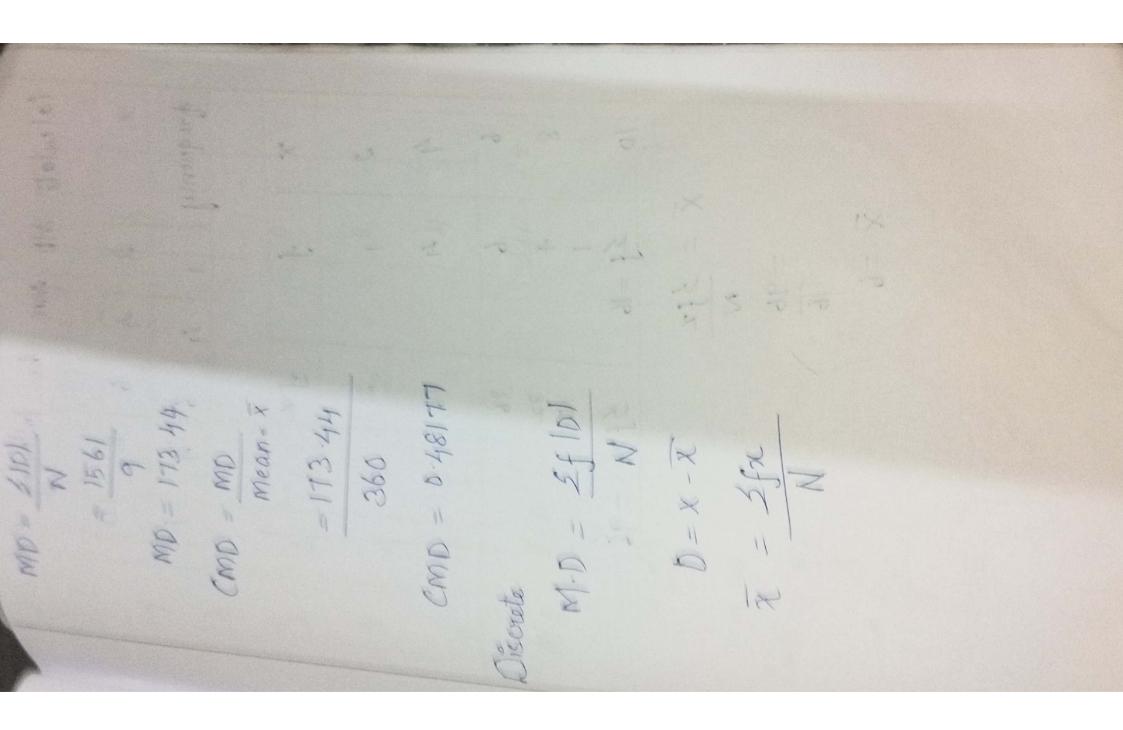


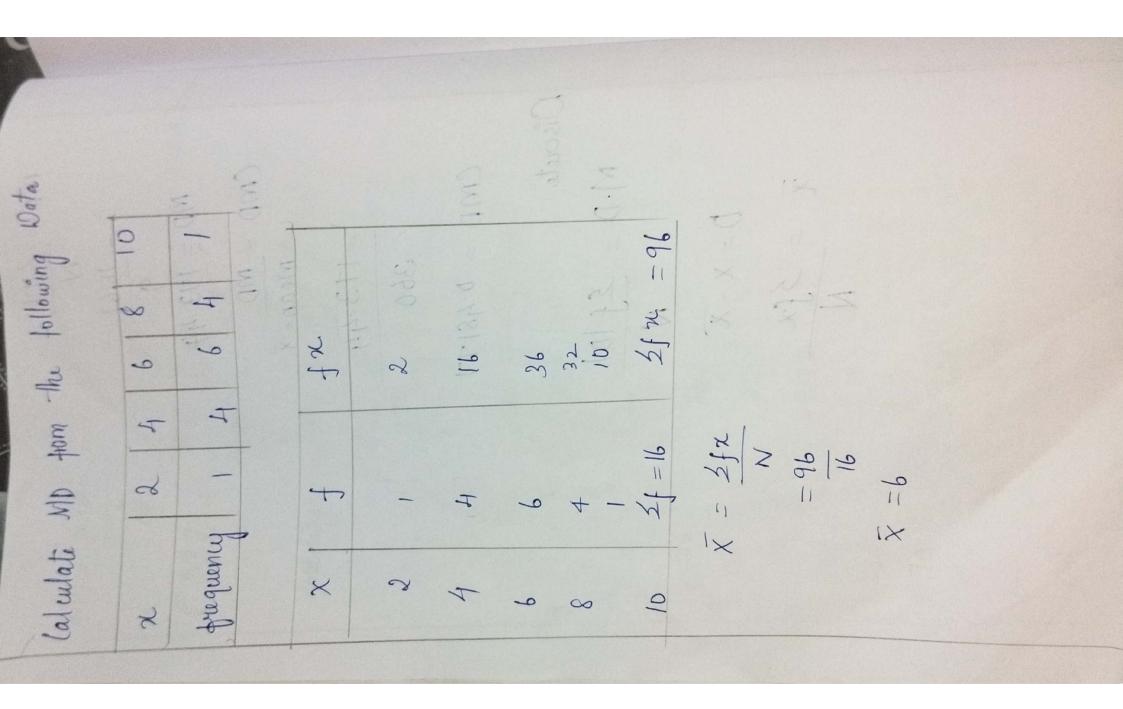
250, 360, 490, 500, 600, 671., Also Calculate Coefficient of mean deviation Calculate recen deviation from mecen 100, 150, 200, for the following dation +33.05 of mean 42.928-33.05 33.05 93-91 42.928 QC = 0.1500 4.939 42.928-15.918 9.818

400 + 150 + 250 + 250 + 490 + 720 + 120 +			X-369	100-369-269		0.65	70 40	003101139	A work of the same	W. Rundling . At	0 00 000	300 000 to 500 500 500 500 500 500 500 500 500 50	1			
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X = X	$CMD = \frac{MD}{M}$ $MD = \frac{2[D]}{2}$	M # 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	(MD = M)	- 174 CMD = 0	calculate me for the follo sofficient of	100, 150, 200,

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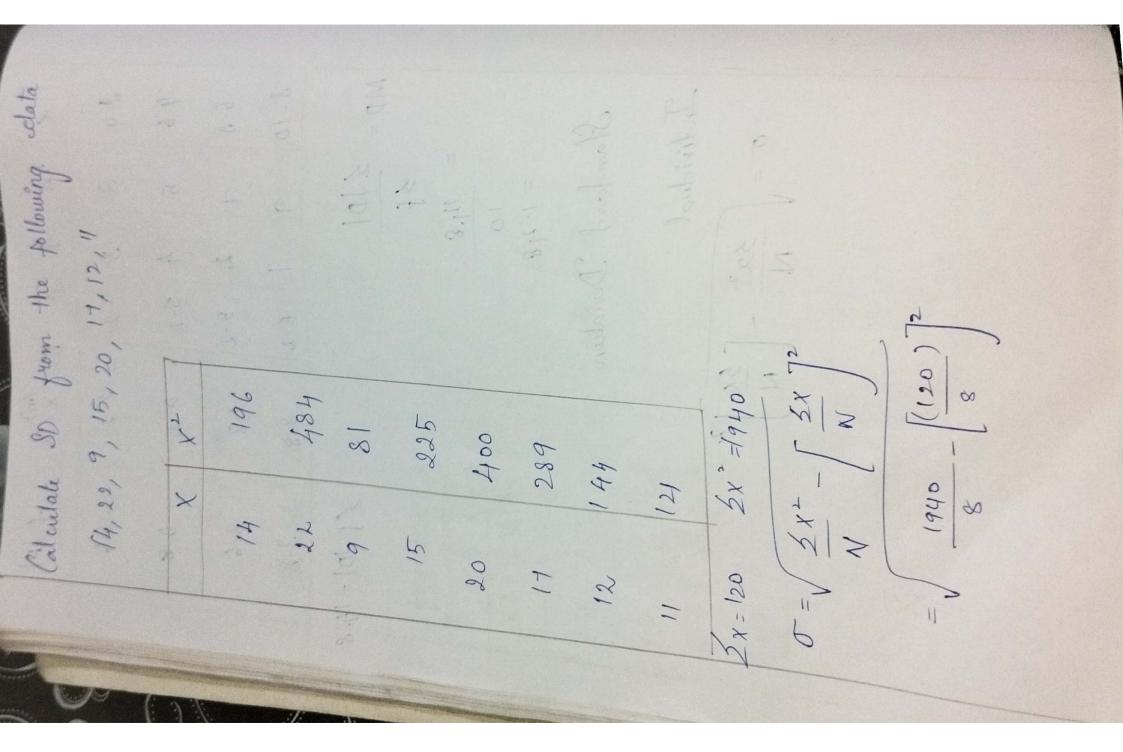


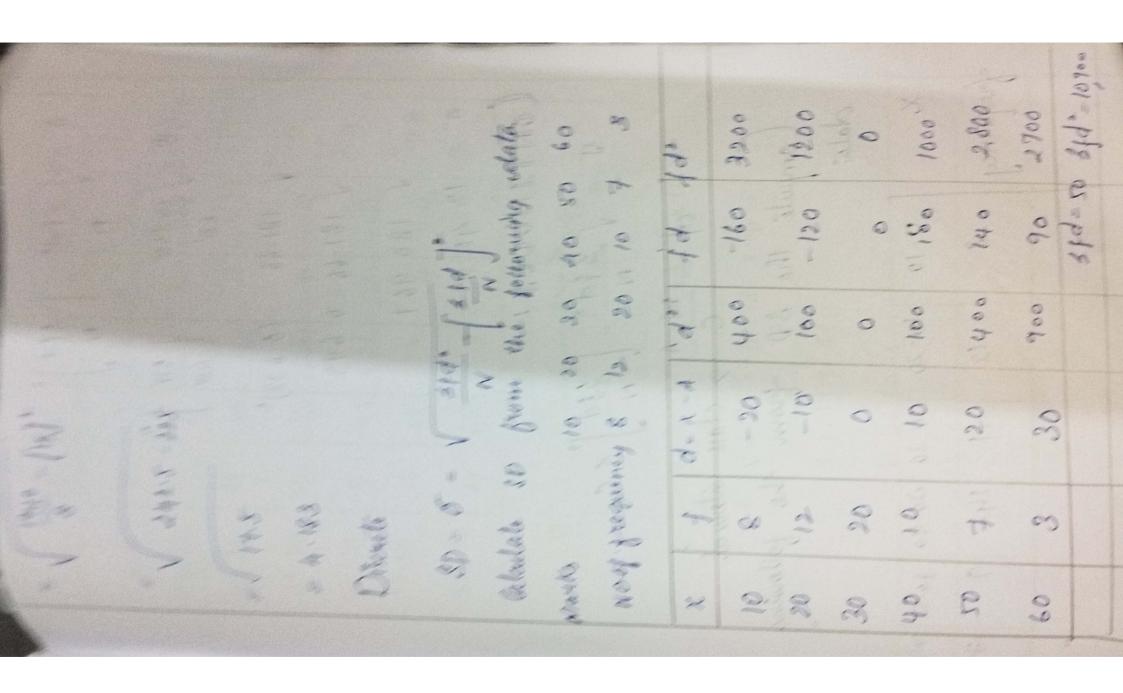


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19, pt	4 -24 -48 4 -24 -48 9 -9 9 9 12 -36	$(36)^2 \times 10$	22) ² × 10 × 10		
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×	20-20 20-20 30-40 30-40 50-60 60-70	Ь			

Mesday MANNO 5.07 dispersion based deviation 55000 001 × Attalien Xy - Combuico ハン achthron. to applicant 0 X

there and the SD of their wages made morters, the and the SD of their wages for and Rs 9 suspectively. There are group of the John Jemale workers those ave Rs 54 and Rs 6 suspectively. Those ave Rs 54 and Rs 6 suspectively. I and the SD for the combined group of 90 workers.	Solution:	characteristics Groups computer	male female	Size N1=50 N2=40 N1+N2=70	Mean = 63 = 54 × 12 =?		We know that combined mean	$N_1 = 50$ $x_1 = 63$	$N_2 = 40$ $N_2 = 54$	X12 - NIX1 + N2X2	$\frac{N_1+N_2}{N_1+N_2}$	= SO (63) +40 (54)	04+09	是一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个
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