Measures of Central Tendency Mean'-- Individual Services Ex. 10, 20, 30, 40, 50 A.M or X = EX = X1+X2+X3+X4+X5 X= 10+20+30+40+50 $X = \frac{150}{5} = 30$

Measures of Central Tendency

Mean'Discrete Servies @ Shortcut method
Direct method

21	f 1	fx_
20	8	160
30	12	360
40	20	800
50	10	500 360
60	6	280
70	4	1
	5f=N=60	5+x=2460)

$$\overline{X} = \frac{2fx}{N}$$

$$\overline{X} = \frac{241}{60}$$

Measures of Central Tendency

Mean'-F Discrete Services @ Shortcut method

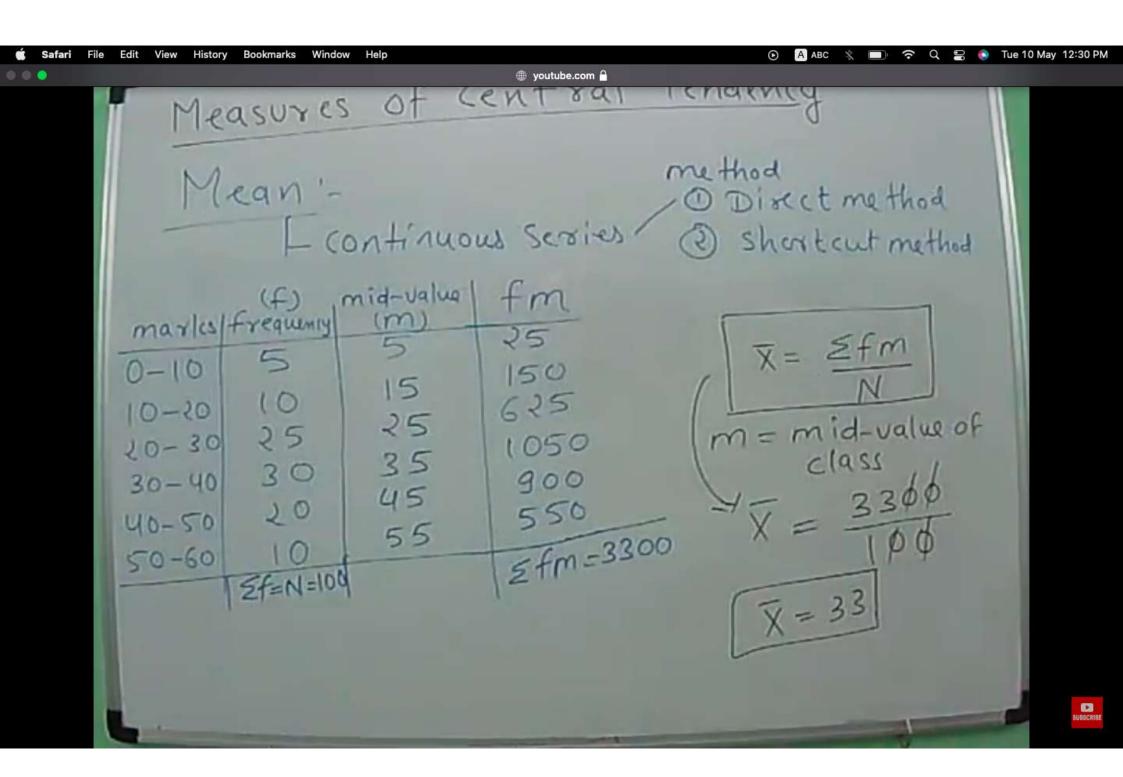
short-cut method

200000000000000000000000000000000000000	f 8 2 2 0 0 6 4	d=x-A d=x-40 - 20 - 10000 30	fd - 160 - 120 000 120 120 120 120 60
	5f=N=60		219

Assumed mean, A = 40

me thod

A = Assumed mean



Measures of Central Tendency

Mean :-	o Direct me thod
charles to method	
(()) ~ () () () ()	x=m-A) fd
0-10 5 5	-30 -150 -20 -250 X=A+&Fd N
20-30 25 25	0 200 51-25+(-266)
30-40 30 45	200 100
50-60 10 55 50-60 10	2fd= X = 35-2
Assumed mean,	$A = 35 \qquad \boxed{\chi = 33}$

Measure of Central Tendency BeingGourav.com Median Positional 5 20 30 40 60 Individual

Series n=5 (odd) 10 20 30 40 50 60 n=6 (Even) median = 30+40 = 70 = 35

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Measure of Central Tendency	
Median	
Discrete Series Income: 4000 (500) (500) (500) (500) (5380)	
persons- 24 26	1
Arrange in Ascending order Income Persons C. filosoft Median = Size of (N) item Income Persons C. filosoft Median = Size of (N) item	
4000 24 = Size of (132) 17cm	
(5-060) 30 = 100 = Six of or	
5800 16 122 61 is 70. 6600 6 Median = 5060 A	
N=5F=122	

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Measure of Central Tendency Median (.f. just golater Continuous series than 21.5 is 28 so, median class=40-50 wages | workers | C.f. 3 3+5=8)(.f. Median = L+ (N - C.f. Xi 20-30 30-40 5 40-50 (20) f 3+5+20 Jihosof 50-60 10 3+5+20+10=38 60-70 5 3+5+20+10+5=43 L=40, f=20, (f.=8 1=10, N=43 Median = 40 + (43 - 8 x 18) N=2F=43 Median = Size of (N) th item = size of (43) th item = 40+21.5-8 Median = Size of 21.5 thitem

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<u>></u>	
Measure of Central	Tendency
Median	= 40+13.5
Continuous series	Median = 40+ 6.75
wages workers (.f.	Median = 46.75 &
20-30 3 30-40 5 3+5=8 (.f.	Median = LT (N - C.f. Xi)
40-50 ROM 3+5+20+10=38	1 = 40, f = 20, (+=8
50-60 5 3+5+20+10+5	=43 i=10. N=43
N=2F=43 Size of (N) th item	Median = 40 + (43 - 8 x 18)
Median = Size of (N) the item = size of (43) the item = size of (43)	115-8
i cia a Nothitem	=40+21.5-8
Median = size of 21.5 mitem	

Being Gourav.com Missing F	requencies when
Median given	Total forg., N=170
find Missing frequencies	Total forg. N= 110+a+b
Class Frequency C.f.	110+a+b=170
10-20 20 30 C.F.	a+b=170-110 $a+b=60$ -0
30-40 40f 70+0 Jiho	Given median = 35
90-50 25 95+9+6	inedian class=30-40
60-70 15 110+413	Median = L + (\frac{\frac{1}{2} - (.f. \times i)}{f}
Given median Value = 35	1 20 11 170 F=40
and total frequency=170	L=30, $N=170$, $f=40C.f.=30+0, \lambda=10$
	(.1. = 301)

Being Gourav.com Missing Frequencies when
Median given 35 = 30+ (170-(30+a) x10
find Missing frequencies 40
class Frequency (.+. 35-30= 85-30-0
0-10 10 10 30 6 $5x4=55-a$
30-30 a 30+a
30-40 (40) FO+a+b
25 95+a+b a = 55 - 20
60-70 $ 5 $ $ 10+47 $ $ a=35 $
(airen)
and total frequency=1+0 35+b=60
b=60-35=25

BeingGourav.com Measure of Central Tendency

Mode

5, 4, 5, 6, 6, 5, 3, 2, 5, 5, 1, 2, 5

mode = 5

Jihosoft

Mode

Discrete Series

Shoe size: 6 7 8 9 10

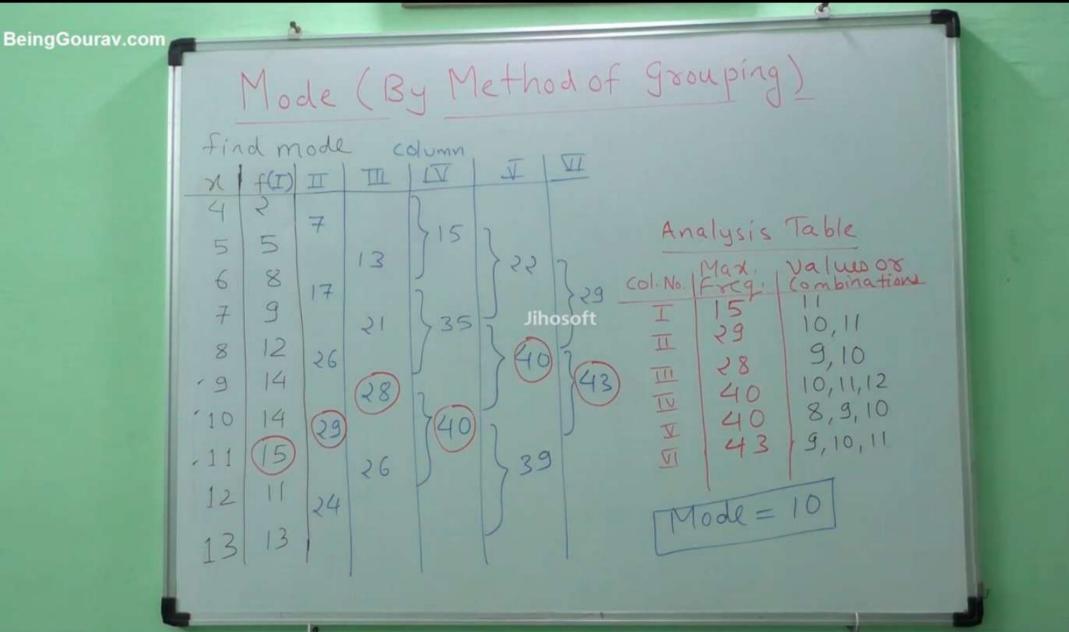
No. of Pairsold: 3 11 128 57 4

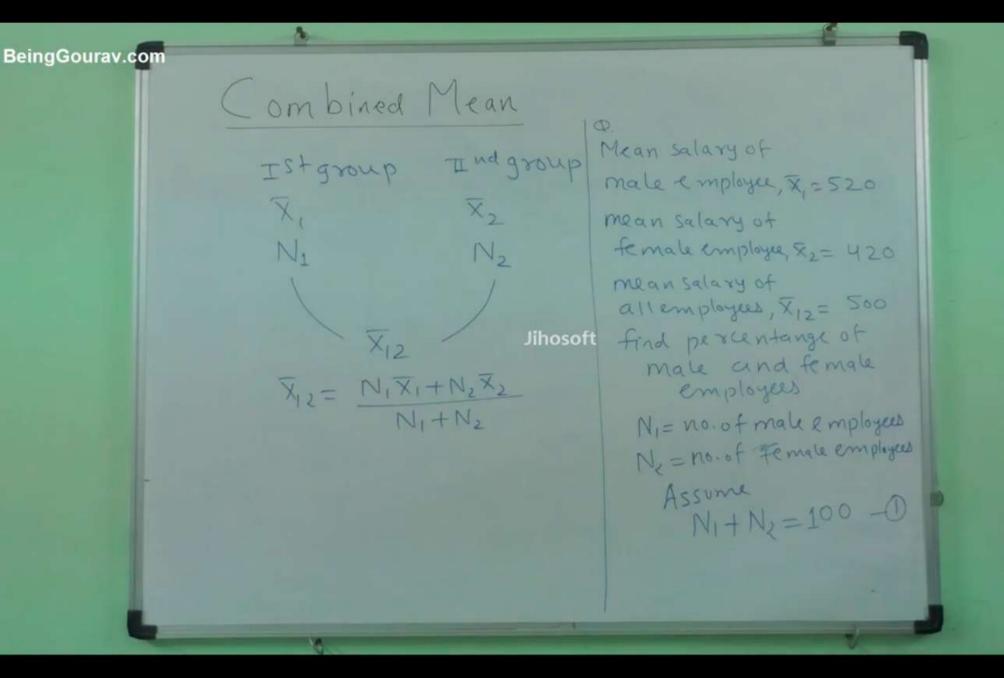
Jihosoft Mode = 8

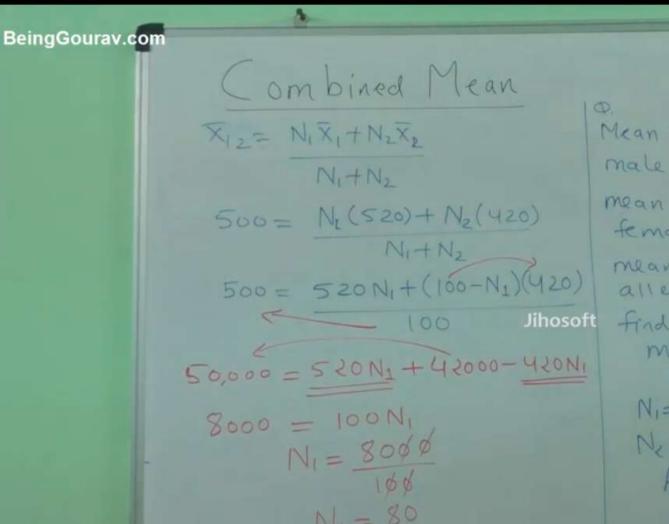
Being Gourav.com Measure of Central Tendency

Mode Continuous series marks | Students (f) 10-50 50-30 max. to 30-40 (58) folg. f. (40-50) 40 50-60 25 60-70 70-80 80-90

modal class = 40-50 mode= L+f,-foxi 1 21,-1,-10 L=40, i=10 Jihosoft Mode = 40+58-24 2x58-40-24 Mode = 40+ 34_x10 116-64 = 40+ 340 = 40+ 6.54 Mod = 46.54







Mean salary of male employee, X = 520 mean salary of female employee, \$2= 420 mean salaxy of all employees, \$10 = 500 find percentange of male and female employees N= no. of male employees No = no. of Female employees Assume NI+N2=100 -0 N=100-N