

A-84

C.I	Group A	x	fx	$x - \bar{x}$	$f x - \bar{x} $	$ x - \bar{x} ^2$	$f x - \bar{x} ^2$
1-5	0	3	0	14.83	0	219.93	0
6-10	7	8 8	56	9.83	68.81	96.63	676.41
11-15	10	13	130	4.83	48.30	23.33	233.3
16-20	2	18	36	0.17	0.34	0.03	0.06
21-25	1	23	23	5.17	5.17	26.73	26.73
26-30	5	28	140	10.17	50.85	103.43	517.15
31-35	4	33	132	15.17	60.68	230.13	920.50
	29		517		234.16		2374.17

$$\text{Mean } \bar{x} = \frac{\sum fx}{\sum f} = \frac{517}{29} = 17.83$$

$$\text{Variance} = \frac{\sum f(x - \bar{x})^2}{\sum f} - 2374.17 / 29 = 81.87$$

$$\text{S.D} = \sqrt{\text{var}} = \sqrt{81.87} = 9.05$$

$$\text{Coefficient of variation} = \frac{\text{S.D}}{\text{mean}} \times 100$$

$$= \frac{9.05}{17.1} \times 100$$

$$= 50.10$$

C.I	Group B	x	fx	$x - \bar{x}$	$ x - \bar{x} ^2$	$f(x - \bar{x})^2$
1-5	2	3	6	17.14	293.78	587.56
6-10	4	8	32	12.14	147.38	589.52
11-15	7	13	91	7.14	50.98	356.86
16-20	20	18	360	2.14	4.58	91.60
21-25	16	23	368	2.86	8.18	130.88
26-30	10	28	280	7.86	61.78	617.80
31-35	4	33	132	12.86	165.38	661.52
	63		1269			3035.74

32.1.
Coefficient of Variation
the smaller the S.D.
the distribution is more
When comparing
CV is said

$$\text{mean } \bar{x} = \frac{\sum fx}{\sum f} = \frac{1269}{63} = 20.14$$

$$\text{Variance} = \frac{\sum f(x - \bar{x})^2}{\sum f} = \frac{3035.79}{63} = 48.19$$

$$\text{S.D} = \sqrt{\text{var.}} = \sqrt{48.19} = 6.94$$

$$\text{Coefficient of Variance} = \frac{\text{S.D}}{\text{mean}} \times 100$$

$$\frac{6.94}{20.14} \times 100 = 34.45$$

ii) Group B has less variable distribution.