

Group A	x	fx	$x - \bar{x}$	$(x - \bar{x})^2$	$(x - \bar{x})$	$(x - \bar{x})^3$
C.I						
0-5	0	0	-14.83	219.93	0	0
6-10	7	56	-9.83	96.63	-68.81	676.41
11-15	10	130	-4.83	23.33	-48.3	233.3
16-20	2	36	0.17	0.03	0.34	0.06
21-25	1	23	5.17	26.73	5.17	26.73
26-30	5	140	10.17	103.43	50.85	517.15
31-35	4	132	15.17	229.13	60.68	920.52
$\sqrt{29}$		517		700.21		2374.17

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

S.D = $\sqrt{\text{variance}}$

variance = $\frac{\sum (x - \bar{x})^2}{\sum f}$

= $\frac{700.21}{29} = 24.15$ $2374.17 = 81.87$

S.D = $\sqrt{24.15}$

= $\sqrt{24.15} = 4.91$ $\sqrt{81.87} = 9.05$

Coefficient of variation

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

= $\frac{9.05}{17.83} \times 100$

= 27.54 $50.76 = 51\%$

Group B

C.I	f	Σx	x - \bar{x}	(x - \bar{x}) ²	f(x - \bar{x})	(x - \bar{x}) ²
1-5	2	3	-17.14	293.78	341.28	587.56
6-10	4	8	-12.14	147.38	48.56	589.52
11-15	9	13	-7.14	50.98	49.98	356.86
16-20	20	18	-2.14	4.58	42.8	91.6
21-25	16	23	2.86	8.18	45.76	180.88
26-30	10	28	7.86	61.78	78.6	617.8
31-35	4	33	12.86	165.38	51.44	205.76
	<u>63</u>	<u>1269</u>		<u>732.06</u>	<u>351.42</u>	<u>2579.98</u>

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

S.D = $\sqrt{\text{variance}}$

$$\text{variance} = \frac{\Sigma (x - \bar{x})^2}{\Sigma f} = \frac{2579.98}{63} = 40.95$$

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

$$= \sqrt{40.95} = 6.4$$

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

$$= \frac{6.4}{20.14} \times 100$$

$$= 31.78$$

Group B has less variable distribution