

19/Encl04/017

Stat 132

$\Sigma(x-\bar{x})$

Group A

$\Sigma(x-\bar{x})$	CI	f	Σ	$f \Sigma$	$\Sigma(x-\bar{x})$
20.935	1-5	10	3	2	14.83
96.63	6-10	7	8	56	9.83
23.3	11-15	10	13	130	4.83
0.028	16-20	2	18	36	0.17
26.72	21-25	1	23	23	5.77
103.42	26-30	5	28	140	10.17
230.12	31-35	4	33	132	15.17
		$\Sigma f = 29$	$\Sigma \Sigma$	517	

$\Sigma(x-\bar{x})$

0 Mean = $\frac{\Sigma f \Sigma}{\Sigma f} = \frac{517}{29} = 17.83$

676.41

233.30 S.D = $\sqrt{\frac{\Sigma f (x - \bar{x})^2}{\Sigma f}}$

0.06

26.73

$\sqrt{\frac{2374.17}{29}}$

517.15

970.52

2374.17

SD = $\sqrt{81.86} = 9.047 \approx 9.05$

C.V = $\frac{SD}{\text{Mean}} \times 100 = \frac{9.05}{17.83} \times 100 = 50.75$

Group B

CL	f	x	fx	$ x - \bar{x} $	$ x - \bar{x} ^2$	$\sum x - \bar{x} ^2$
1-5	2	3	6	40.75	1660.56	3321.12
6-10	4	8	32	55.75	1278.06	10824.48
11-15	7	13	91	20.75	945.56	6618.92
16-20	20	18	360	25.75	663.06	13261.2
21-25	16	23	368	20.75	430.56	6888.96
26-30	10	28	280	75.75	2488.06	24880.6
31-35	4	33	132	10.75	115.56	462.24
			1269			43257.4

$$\text{Mean} = \frac{\sum fx}{\sum f} = \frac{1269}{27} = 43.75$$

$$SD = \sqrt{\frac{\sum |x - \bar{x}|^2}{\sum f}}$$

$$= \sqrt{\frac{43257.4}{63}}$$

$$= \sqrt{686.62}$$

$$SD = 26.204$$

$$CV = \frac{SD}{\text{Mean}} \times 100$$

$$CV = \frac{26.20}{43.75} \times 100$$

$$CV = 59.89$$