

Ube Chidera
 Computer Engineer
 19/EM6102/020
 02/04/2020
 STA 132

GROUP A.

CI	f	x	fx	$(x - \bar{x})$	$(x - \bar{x})^2$	$f(x - \bar{x})^2$
1-5	0	3	0	-17.83	317.91	0
6-10	7	8	56	-9.83	96.63	676.41
11-15	10	13	130	-4.83	23.33	233.2
16-20	9	18	36	0.17	0.03	0.06
21-25	1	23	23	5.17	26.73	26.73
26-30	5	28	140	10.17	103.43	517.15
31-35	4	33	132	15.17	230.13	920.52
	$\Sigma f = 29$		$\Sigma fx = 517$			$\Sigma f(x - \bar{x})^2 = 2374.17$

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

$$\text{Standard Deviation } S = \sqrt{\frac{\Sigma f(x - \bar{x})^2}{\Sigma f - 1}}$$

$$= \sqrt{\frac{2374.17}{28}} = 9.21$$

Coefficient Of Variation, $C.V = \frac{S.D}{\text{mean}}$

$$= \frac{9.21}{17.83} \times 100$$

$$= 51.65\%$$

GROUP B

CI	f	x	f x	(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	-4.14	17.14	274.24
26-30	10	28	280	-6.14	102.82	1028.20
31-35	4	33	132	-16.14	260.50	1042.00
	$\Sigma f = 63$		$\Sigma fx = 1269$			$\Sigma f (x - \bar{x})^2 = 3969.98$

i. Mean = $\frac{\Sigma fx}{\Sigma f} = \frac{1269}{63} = 20.14$

ii. S.D, $S = \sqrt{\frac{\Sigma f (x - \bar{x})^2}{\Sigma f - 1}}$
 $= \sqrt{\frac{3969.98}{62}}$

$= 8.00$

iii. Coefficient of variation (C.V = S.D) $\times 100$ mean
 $= \frac{8.00}{20.14} \times 100$

$= 39.72$

C. Group B has a less variable distribution