

GROUP B

2) C.I	f_0	x	f_0x	$(x - \bar{x}_0)$	$(x - \bar{x}_0)^2$	$f(x - \bar{x}_0)^2$
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
	Σf		Σf_0x			$\Sigma f(x - \bar{x}_0)^2$
	63		1269			2035.74

$$\text{Mean } (\bar{x}_0) = \frac{\Sigma f_0x}{\Sigma f_0}$$

$$= \frac{1269}{63}$$

$$= 20.14$$

$$S.D._0 = \sqrt{\frac{\Sigma f(x - \bar{x}_0)^2}{\Sigma f}} = \sqrt{\frac{2035.74}{63}}$$

$$= 6.94$$

$$C.V._0 = \frac{S.D._0}{\bar{x}_0} \times 100$$

$$= 34.46$$

3) Group B has less variable distinction than group A because its coefficient of variation is smaller

1) c.i.	f_i	x	$f_i x$	$x - \bar{x}$	$(x - \bar{x})^2$	f_i $f_i (x - \bar{x})^2$
1-5	0	3	0	-14.83	219.93	0
6-10	7	8	56	-9.83	96.63	676.41
11-15	10	13	130	-4.83	23.33	235.30
16-20	2	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
	Σf_i		$\Sigma f_i x$			$\Sigma f_i (x - \bar{x})^2$
	29		517			2374.17

$$\text{Mean } (\bar{x}_1) = \frac{\Sigma f_i x}{\Sigma f_i}$$

$$= \frac{517}{29}$$

$$= 17.83$$

$$S.D. = \sqrt{\frac{\Sigma f_i (x - \bar{x})^2}{\Sigma f_i}} = \sqrt{\frac{2374.17}{29}}$$

$$= \sqrt{81.87}$$

$$= 9.05$$

$$C.V. = \frac{S.D.}{\bar{x}_1} \times 100$$

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

$$= 50.76$$