

Group B

CT	f	n	f _o	$(x - \bar{x})^2$	$f(x - \bar{x})^2$
-5	2	5	6	293.9824	587.9648
10	4	9	22	167.6524	670.6096
-15	7	16	93	51.0224	357.1552
-20	22	28	300	4.5724	99.5928
-25	16	23	368	2.1624	34.608
-30	10	18	240	61.7324	617.324
-35	4	13	132	185.3024	741.2096

$$\text{Mean of Group B } (\bar{x}) = \frac{\sum f x}{\sum f} = \frac{1269}{63} = 20.143$$

$$S.D = \sqrt{\frac{\sum f(x - \bar{x})^2}{\sum f - 1}} = \sqrt{\frac{2990.646}{63 - 1}} = \sqrt{\frac{2990.646}{62}}$$

$$= 6.945$$

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

$$= \frac{6.945}{20.143} \times 100$$

$$= 34.489\%$$

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The group with the lower C.V. is less variable, so therefore Group B has less variable and more uniform.

Group A	f	x	fx	$fx \cdot x^2$	$f x-x $
1-5	0	3	0	0	0
6-10	2	8	16	128	16
11-15	10	13	130	1690	130
16-20	2	18	36	648	36
21-25	1	23	23	529	23
26-30	5	28	140	3920	140
31-35	4	33	132	4356	132

Mean of A (\bar{x}) = $\frac{\sum fx}{\sum f} = \frac{517}{29} = 17.83$

Since A was restricted to age group less than 40 it is a sample of the total population of those with yellow power.

S.D. of group A = $\sqrt{\frac{\sum f(x-\bar{x})^2}{\sum f - 1}} = \sqrt{\frac{2326.1391}{29-1}} = \sqrt{\frac{2326.1391}{28}}$

= 9.20%

Coefficient of Variation = $\frac{\text{Standard deviation}}{\text{mean}} \times 100\%$
 = $\frac{9.20\%}{17.83} \times 100\%$
 = 51.12%