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1. Estn

Let f_1 represent Group A

" f_2 represent Group B

" x represent the mean value

C.I.	f_1	f_2	x	$\bar{x}_1 = f_1 x$	$\bar{x}_2 = f_2 x$	d_1	d_2	d_1^2	d_2^2	$f_1(d_1^2)$	$f_2(d_2^2)$
1-5	0	2	3	0	6	-4.83	-4.14	219.93	293.78	0	587.56
6-10	7	4	8	56	32	-9.83	-12.14	96.63	147.38	676.41	589.52
11-15	10	7	13	130	91	-4.83	-7.14	23.33	50.98	233.30	356.86
16-20	2	20	18	36	360	0.17	-2.14	0.03	4.58	0.06	91.60
21-25	1	16	23	23	368	5.17	2.86	26.73	8.18	26.73	130.88
26-30	5	10	28	140	280	10.17	7.86	103.43	61.78	517.15	617.80
31-35	4	4	33	132	132	15.17	12.86	230.13	165.38	920.52	661.52
	29	63		517	1269					2374.17	3035.74

i. Mean for group A, $\bar{x}_1 = \frac{\sum f_1 x_1}{\sum f_1} = \frac{517}{29} = 17.827$

≈ 17.83

Mean for group B, $\bar{x}_2 = \frac{\sum f_2 x_2}{\sum f_2} = \frac{1269}{63} = 20.1428$

≈ 20.14

$$\text{Variance} = \frac{\sum f(x - \bar{x})^2}{\sum f} = \frac{\sum (d^2)}{\sum f}$$

$$d = x - \bar{x}$$

$$\begin{aligned} \text{Variance for group A} &= \frac{\sum f_1 (d_1^2)}{\sum f_1} = \frac{2374.17}{29} \\ &= 81.87 \end{aligned}$$

$$\begin{aligned} \text{Variance for group B} &= \frac{\sum f_2 (d_2^2)}{\sum f_2} = \frac{3035.74}{63} \\ &= 48.19 \end{aligned}$$

Standard deviation for Group A;

$$\begin{aligned} S.D._1 &= \sqrt{\text{Variance}_1} \\ &= \sqrt{81.87} \\ &= 9.05 \end{aligned}$$

Standard deviation for Group B;

$$\begin{aligned} S.D._2 &= \sqrt{\text{Variance}_2} \\ &= \sqrt{48.19} \\ &= 6.94 \end{aligned}$$

$$\begin{aligned} \text{ii) Coefficient of Variation for Group A} &= \frac{S.D._1}{\bar{x}_1} \times 100\% \\ &= \frac{9.05}{517} \times 100 \\ &= 1.75 \end{aligned}$$

$$\text{Coefficient of Variation for Group B} = \frac{S.d.}{\bar{x}} \times 100\%$$

$$= \frac{6.94}{12.69} \times 100$$

$$= 0.546$$

$$\approx 0.55$$

iii.) Group B has less variable distribution.