

$$S.D(A) = \sqrt{\frac{\sum f_a(x-\bar{x})^2}{\sum f_a}} = \sqrt{\frac{2373.86}{29}}$$

$$\Rightarrow \sqrt{81.84} = 9.05$$

$$S.D(B) = \sqrt{\frac{\sum f_b(x-\bar{x})^2}{\sum f_b}} = \sqrt{\frac{3452.36}{63}} = \sqrt{54.799}$$

$$= 7.40$$

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$$\begin{aligned} \text{Co-efficient of variation (A)} &= \frac{S.D(A)}{\text{mean}(A)} \\ &= \frac{9.05}{17.83} \\ &= 0.508 \end{aligned}$$

$$\begin{aligned} \text{Co-efficient of variation (B)} &= \frac{S.D(B)}{\text{mean}(B)} \\ &= \frac{7.40}{20.14} \\ &= 0.367 \end{aligned}$$

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Assignment

Class	Class mark (x)	Group A	Group B	x_A	x_B
1-5	3	0	2	0	6
6-10	8	7	4	56	32
11-15	13	10	7	130	91
16-20	18	2	20	36	360
21-25	23	1	16	23	368
26-30	28	5	10	140	380
31-35	33	4	4	132	132
		29	63	519	1269

$$\text{Mean(A)} = \frac{\sum x_A}{\sum A} = \frac{519}{29} = 17.83$$

$$\text{Mean(B)} = \frac{\sum x_B}{\sum B} = \frac{1269}{63} = 20.14$$

$(x - \bar{x})_{\text{Group A}}$	$(x - \bar{x})_{\text{Group B}}$	$(x - \bar{x})_{\text{Group A}}$	$(x - \bar{x})_{\text{Group B}}$	$F_{A(x - \bar{x})}^2$	$F_{B(x - \bar{x})}^2$
-14.83	-17.14	219.9	293.8	0	587.60
-9.83	-12.14	96.6	147.4	676.2	589.60
-4.83	-7.14	23.3	50.98	233.0	356.36
0.17	-2.14	0.03	4.6	0.06	92.00
5.17	2.86	26.7	8.2	26.7	131.20
10.17	7.86	103.4	61.8	517.0	1034.0
15.17	12.86	250.1	165.4	920.4	661.1