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STA 132

19/ENG05/011

Class	class mark (x)	Group A	Group B	$\Sigma x_A$	$\Sigma x_B$
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	280
31-35	33	4	4	132	132

$$\text{Mean (A)} = \frac{\Sigma x_A}{\Sigma A} = \frac{517}{29} = 17.827 = 17.83$$

$$\text{Mean (B)} = \frac{\Sigma x_B}{\Sigma B} = \frac{1869}{63} = 29.667 = 29.67$$

$(x - \bar{x})_{\text{Group A}}$	$(x - \bar{x})_{\text{Group B}}$	$(x - \bar{x})^2_{\text{Group A}}$	$(x - \bar{x})^2_{\text{Group B}}$	$f_A(x - \bar{x})^2$	$f_B(x - \bar{x})^2$
-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	1034.00
15.17	12.86	230.1	165.4	920.4	661.60

$$S.D(A) = \sqrt{\frac{\Sigma f_A(x - \bar{x})^2}{\Sigma f_A}} = \sqrt{\frac{2373.36}{29}} = \sqrt{81.84} = 9.05$$

$$S.D(B) = \sqrt{\frac{\Sigma f_B(x - \bar{x})^2}{\Sigma f_B}} = \sqrt{\frac{3452.36}{63}} = \sqrt{54.799} = 7.40$$

$$\text{CO-efficient of Variation (A)} = \frac{\text{S.D(A)}}{\text{mean(A)}}$$

$$= \frac{9.05}{17.83} = 0.508\%$$

$$\text{CO-efficient of Variation (B)} = \frac{\text{S.D(B)}}{\text{mean(B)}}$$

$$= \frac{7.40}{20.14} = 0.367\%$$

$$\frac{17.83}{17.83} = \frac{17.83}{17.83} = 1.00 = \frac{17.83}{17.83} = (A) \rightarrow 1$$

$$\frac{20.14}{20.14} = \frac{20.14}{20.14} = 1.00 = \frac{20.14}{20.14} = (B) \rightarrow 1$$

Year	Price (₹)	Quantity (kg)	Value (₹)	Price (₹)	Quantity (kg)	Value (₹)
2018	10	100	1000	12	100	1200
2019	12	100	1200	15	100	1500
2020	15	100	1500	18	100	1800
2021	18	100	1800	20	100	2000
2022	20	100	2000	22	100	2200
2023	22	100	2200	25	100	2500
2024	25	100	2500	28	100	2800
2025	28	100	2800	30	100	3000

$$\frac{28.18}{28.18} = \frac{28.18}{28.18} = 1.00 = \frac{28.18}{28.18} = (A) \rightarrow 1$$

$$\frac{30.14}{30.14} = \frac{30.14}{30.14} = 1.00 = \frac{30.14}{30.14} = (B) \rightarrow 1$$