

Group B				20.1		
C.I	f	x	fx	$x - \bar{x}$	$[x - \bar{x}]^2$	$f[x - \bar{x}]^2$
1-5	2	3	6	-17.1	292.41	584.82
6-10	4	8	32	-12.1	146.41	1171.28
11-15	7	13	91	-7.1	50.41	352.87
16-20	20	18	360	-2.1	4.41	88.2
21-25	16	23	368	2.9	8.41	134.56
26-30	10	28	280	7.9	62.41	624.1
31-35	4	33	132	12.9	166.41	665.64
	63					

$$\text{Mean } (\bar{x}) = \frac{\sum fx}{\sum f} = \frac{1296}{63} = 20.1$$

(i) Mean for group B = 20.1 ages

$$\begin{aligned} \text{S.d for group B} &= \sqrt{\frac{\sum f[x - \bar{x}]^2}{\sum f}} = \sqrt{\frac{3621.47}{63}} \\ &= \sqrt{57.48} \\ &= 7.58 \text{ ages} \end{aligned}$$

(ii) Coefficient of Variation group B = $\frac{\text{s.d}}{\text{mean}} \times 100$

$$= \frac{7.58}{20.1} \times 100$$

$$= 37.72$$

(iii) Group B has the less Variable distribution

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Answers

Group A

C.I	F	x	fx	$x - \bar{x}$	$(x - \bar{x})^2$	$f(x - \bar{x})^2$
1-5	0	3	0	-14.8	219.04	0
6-10	7	8	56	-9.8	96.04	672.28
11-15	10	13	130	-4.8	23.04	230.4
16-20	2	18	36	0.2	0.04	0.08
21-25	1	23	23	5.2	27.04	27.04
26-30	5	28	140	10.2	104.04	520.2
31-35	4	33	132	15.2	231.04	924.16
	29		617			2374.16

$$\text{mean } (\bar{x}) = \frac{\sum fx}{\sum f} = \frac{617}{29} = 21.27 \text{ ages}$$

i) mean for group A = 21.27

$$\text{Standard deviation} = \sqrt{\frac{\sum f(x - \bar{x})^2}{\sum f}} = \sqrt{\frac{2374.16}{29}} = \sqrt{81.87} = 9.05 \text{ ages}$$

$$\text{ii) Coefficient of Variation for group A} = \frac{\text{s.d.}}{\text{mean}} \times 100 = \frac{9.05}{21.27} \times 100 = 42.54$$