

Ama Diwagholan Emmanuel

Electrical Electronics

STA 132

19/ENR04/002

C.I	$f_A$ Group A	$f_B$ Group B	$x$	$f_A x$	$f_B x$	$ x - \bar{x}_A $	$ x - \bar{x}_B $	$ x - \bar{x}_A ^2$	$ x - \bar{x}_B ^2$	$f_A  x - \bar{x}_A ^2$	$f_B  x - \bar{x}_B ^2$
1-5	0	2	3	3	6	14.93	17.14	222.90	293.78	0	587.56
6-10	7	4	8	56	32	9.93	12.14	98.60	147.38	690.2	589.52
11-15	10	7	13	130	91	4.93	7.14	24.30	50.98	243	356.86
16-20	2	20	18	36	360	0.07	2.14	0.0049	4.58	0.0098	91.6
21-25	1	16	23	23	368	5.07	2.86	25.70	8.18	25.70	130.88
26-30	5	10	28	140	280	10.07	7.86	101.40	61.78	507	617.8
31-35	4	4	33	132	132	15.07	12.86	227.10	165.38	908.4	661.52
	29	63		520	1269					1753.31	3035.7

$$\bar{x}_A = \frac{\sum fx}{\sum f} = \frac{520}{29} = 17.93$$

$$\bar{x}_B = \frac{1269}{63} = 20.14$$

$$\text{Standard Deviation (A)} = \sqrt{\frac{\sum f(x - \bar{x})^2}{\sum f}} = \frac{1753.31}{29} = \sqrt{60.45} = 7.77$$

$$\text{Standard Deviation (B)} = \sqrt{\frac{3035.74}{63}} = \sqrt{48.19} = 6.94$$

7/11  
13  
93  
95  
0  
C

$$\text{Coefficient of Variation} = \frac{S.D.}{\text{mean}} \times 100 = \frac{7.77}{17.93} = 43.33$$

$$CO = 48 \cdot \frac{6.94}{20.14} \times 100 = 34.46$$

Group B has less Variable Distribution.