Name: Anruddh Kulkaeni

Roll No: 1081

14-12-21

14/12/2021

の2= をイスーえ)

Q1.  $\sqrt{21} = 6,7,10,12,13,4,8,12$ 

$$\sum (\overline{xi}) = 6 + 7 + 10 + 12 + 13 + 4 + 8 + 12$$

$$= 13 + 10 + 25 + 24$$

= 37 + 35= 72

$$\frac{\text{Mean} = \Sigma(\overline{x_1})}{N} = \frac{72}{8} = 9$$

$$|xi-x| = 2,3,1,3,4,5,1,3$$

$$(x-xi)^2 = 4,9,1,9,16,25,1,9$$

TENTO PAST NA a

Variance = 
$$\Sigma(x-xi)$$

N

$$= \sum (\chi_{\xi} - \chi_{i}) = \frac{74}{8} = 9.25$$

$$\sigma^2 = 9.25$$

Mame: Annuddh Kulkani Roll No: IOSI

12-21

					2	2	
4.	αi	fi	xifi	2   xi - x1	1x1-21	1xi-\(\bar{\pi}\)	
	6	2	12	[6-19] =-13	169	338	
	10	4	40	9 018	* 81	324	
	14	7	98	5	25	175	
	18	12	216	12 414 4 4 + 8 + 12	+014548	12 17	The same of
	24	8	192	5.0 + 70	25	200	
	28	4	112	9	284 42	324	
	30	3	90	1	121	363	
			Exifi = 7	760		±1736	
	To be a			0	1501.	2 (100	

$$\sigma^2 = \mathcal{E} f(\chi_1 - \bar{\chi})$$

$$\mathcal{E} f$$

				A = 64		2		
Qb)	xi	fi	y = xi - A	412	fiyi	fiyi	classes for	(8)
	60	2	J -4	16	-8	32	01-0	
	61	1	-3	9		98	08-01	
	62	12	-2	4	-24	4831	20-30	
	63	29	FL	893	- 29	291	30-40	
	64	25	0	0	20	0	40-50	
	65	12	5/2/-7 =	1850	12	12		
	66	10	2	4	20	40		
	67	4	3	9	12	36	$\overline{\mathcal{X}} = 1$	
	168	5	4	16	20	803		
						2 = 2		
					= 132	- 0099	V0.5 =	
			h=1			90		
			2 - 2	- 01 - 11				
) it (it	14	Med	$a\eta = a + 2$	2 + 191	×hom	7	Class	(0)
0.9		-30	4 5	sfi	34.5	. is	32.5-36.5	
- 5		+1-			38.5	14	36.5 - 40.5	
		0	0 = 64 +	0			40.5-44.5	
٤.		24	1		5.94	22	44.5-48.5	
0.0		Mea	n = 64		5.05	5.5	48.5 - 52.5	
P)			, h	14=	P: 11. 2	11	212	
	Std	devi	ation = h	YNZ			191)	
			N		3	SP = A	A = 4	
	$= 1 \sqrt{28600}$							
	Var = 47 (100 x (199 - 2500)							
				2634 0	(1990)	001 Al		
				CAR W	MILL			

Sundaram

		0		48=B			
8)	Classes	frequencies	mid	fizi	xi-z	诗	
	0-10	5	5	25	466	2	
	10-20	8	15	120	144	1	
	20-30	1584	25	315	4	12	
	30 - 40	16 9	35	560	64	60.	
	40 - 50	60	45	270	324	25	K. Carlo
		12	[2]	1350	= = = = = = = = = = = = = = = = = = =	6600	
		0.1		1000	2 10 10	151	

$$\overline{\alpha} = \frac{1350}{50} = 27$$

$$Vay = 6600 = 132$$

10) Class 
$$f$$
 mid  $y_1 = \frac{x_1 - x}{h}$   $y_1$   $f(y_1)$   $f(y_1)$   $y_1$   $3x \cdot 5 - 3b \cdot 5$   $15$   $34 \cdot 5$   $-2$   $4$   $-30$   $60$   $3b \cdot 5 - 40 \cdot 5$   $14$   $38 \cdot 5$   $-1$   $1$   $-17$   $17$   $40 \cdot 5 - 44 \cdot 5$   $21$   $42 \cdot 5$   $0$   $0$   $0$   $0$   $44 \cdot 5 - 48 \cdot 5$   $22$   $46 \cdot 5$   $1$   $1$   $22$   $22$   $48 \cdot 5 - 5a \cdot 5$   $25$   $50 \cdot 5$   $2$   $4$   $50$   $100$ 

\$ 68

Mean = 
$$43.5$$
  
 $Var = \frac{4^2}{100^2} (100 \times $199 - 25^2)$   
 $= \frac{16}{10000} (19900 - 625)$ 

