Enjoy the assignment to collect the primary data from (5-10) families around your neighborhood or relatives (Total number of person will be around 30-40) of the following variables:

1. Division/ origin
2. Gender
3. Age
4. Height
5. Weight
6. Education Level
7. Occupation
8. COVID-19 information (positive/negative/suspected/Vaccinated)

| No.	Division	Gender	Age	Height (cm)	Weight(kg)	Edu. Level	Occupation	Covid-19
1	DHA	M	56	167	72	MSC	Teacher	N
2	DHA	F	48	159	56	MA	JOB	S
3	DHA	F	21	165	67	BSC	STUDENT	N
4	DHA	F	16	162	62	SCHOOL	STUDENT	N
5	DHA	F	10	80	28	SCHOOL	STUDENT	N
6	JOS	M	72	167	75	BA	Business	P
7	DHA	F	56	150	70	College	House Wife	V
8	JOS	M	26	162	76	BBA	JOB	P
9	JOS	M	20	172	98	BSC	STUDENT	N
10	JOS	M	14	113	42	Madrasa	STUDENT	N
11	BRI	F	19	159	48	School	House Wife	N
12	KHU	M	65	170	73	Madrasa	JOB	S
13	KHU	F	55	152	54	College	House Wife	S
14	KHU	M	22	150	78	LLB	STUDENT	N
15	KHU	F	16	159	56	SCHOOL	STUDENT	N
16	KHU	M	13	128	51	Madrasa	STUDENT	N
17	BRI	M	69	150	79	SCHOOL	Business	V
18	BRI	F	58	144	62	SCHOOL	House Wife	S
19	BRI	F	22	150	60	BA	STUDENT	N
20	BRI	F	19	162	54	College	STUDENT	N
21	MYM	M	58	156	60	MBA	Business	P
22	MYM	F	41	152	68	BBA	House wife	S
23	MYM	F	21	158	64	BSC	STUDENT	N
24	MYM	M	16	155	58	SCHOOL	STUDENT	N
25	CHI	M	57	165	75	COLLEGE	JOB	S
26	CHI	F	49	155	62	MBA	Teacher	V
27	CHI	M	22	162	55	BSC	STUDENT	P
28	CHI	F	16	155	52	SCHOOL	STUDENT	N
29	SHY	M	52	171	65	MBA	JOB	P
30	SHY	F	46	152	62	College	Housewife	S
31	SHY	F	21	165	48	BSC	STUDENT	N
32	SHY	F	14	128	32	SCHOOL	STUDENT	N

1. Construct a Height distribution for your neighbors or relatives.
2. Draw a Histogram and Frequency curve and comment on the shape of the Height.
3. Represent the COVID-19 information of your neighbors or relatives graphically.
4. Show the relationship of the Weight and Age of your neighbors or relatives.
5. Which variable has more variability between Age and Height?

*** For the students of having ID (Even-Odd[last two digits]), i.e. 1105-1212-1.

Answer to the Question no -1

Class Interval	Tally	Frequency(f_1)	Mid Value x_1	f_1x_1	Cumulative Frequency(cf)
80-96	I	1	88	88	1
96-112		0	104	0	1
112-128	I	1	120	120	2
128-144	II	2	136	272	4
144-160	ИИ ИИ ИИ I	16	152	2432	20
160-176	ИИ ИИ II	12	168	2016	32
Total		N=32		4928	

Answer to the Question no -2
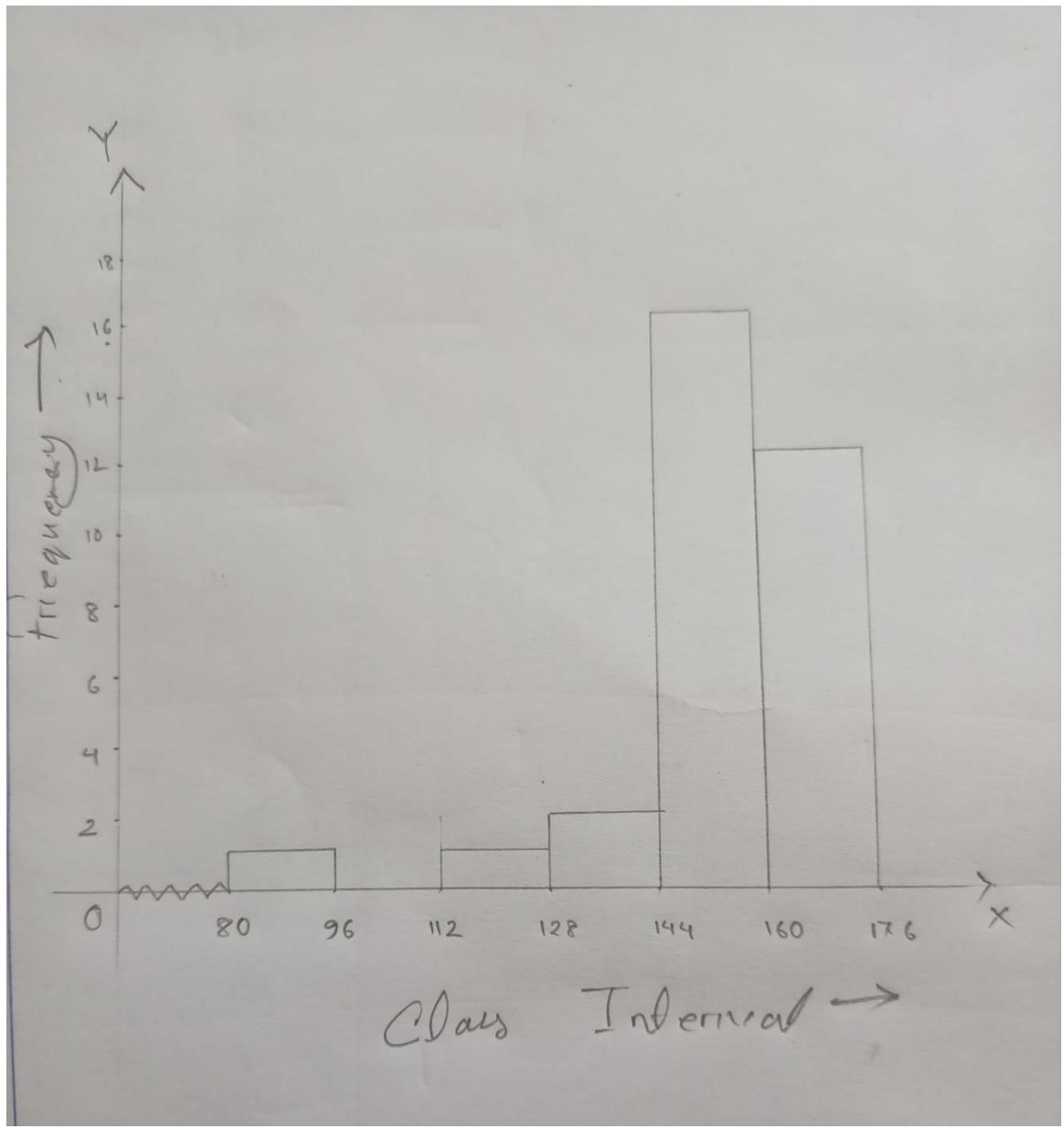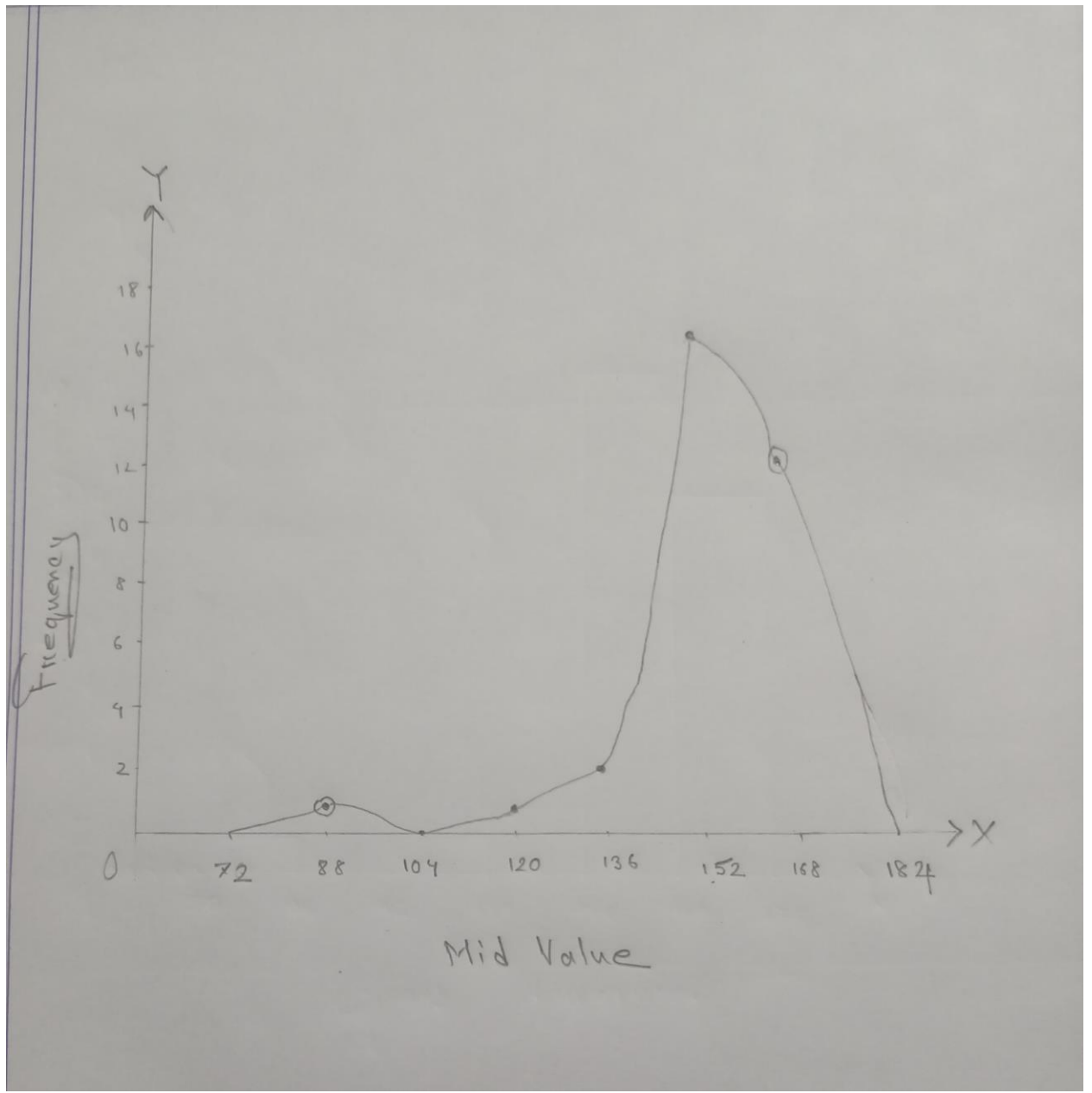
Class Interval →

Mid Value

Category	x	Angels $= \frac{x \times 360°}{n}$
Positive	5	56.25
Negative	17	191.25
Suspected	7	78.75
Vaccinated.	3	33.75
Total	$n = 32$	360
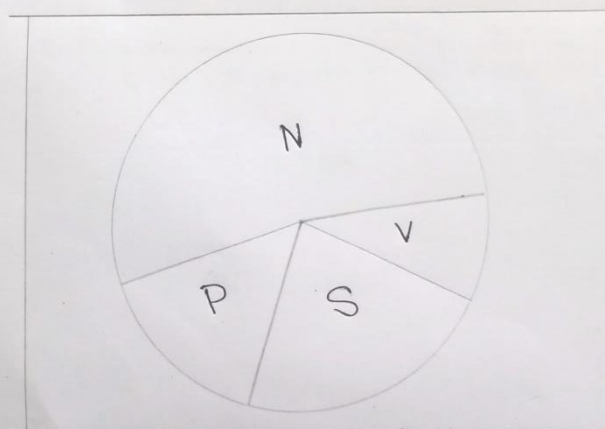
Pie Diagram
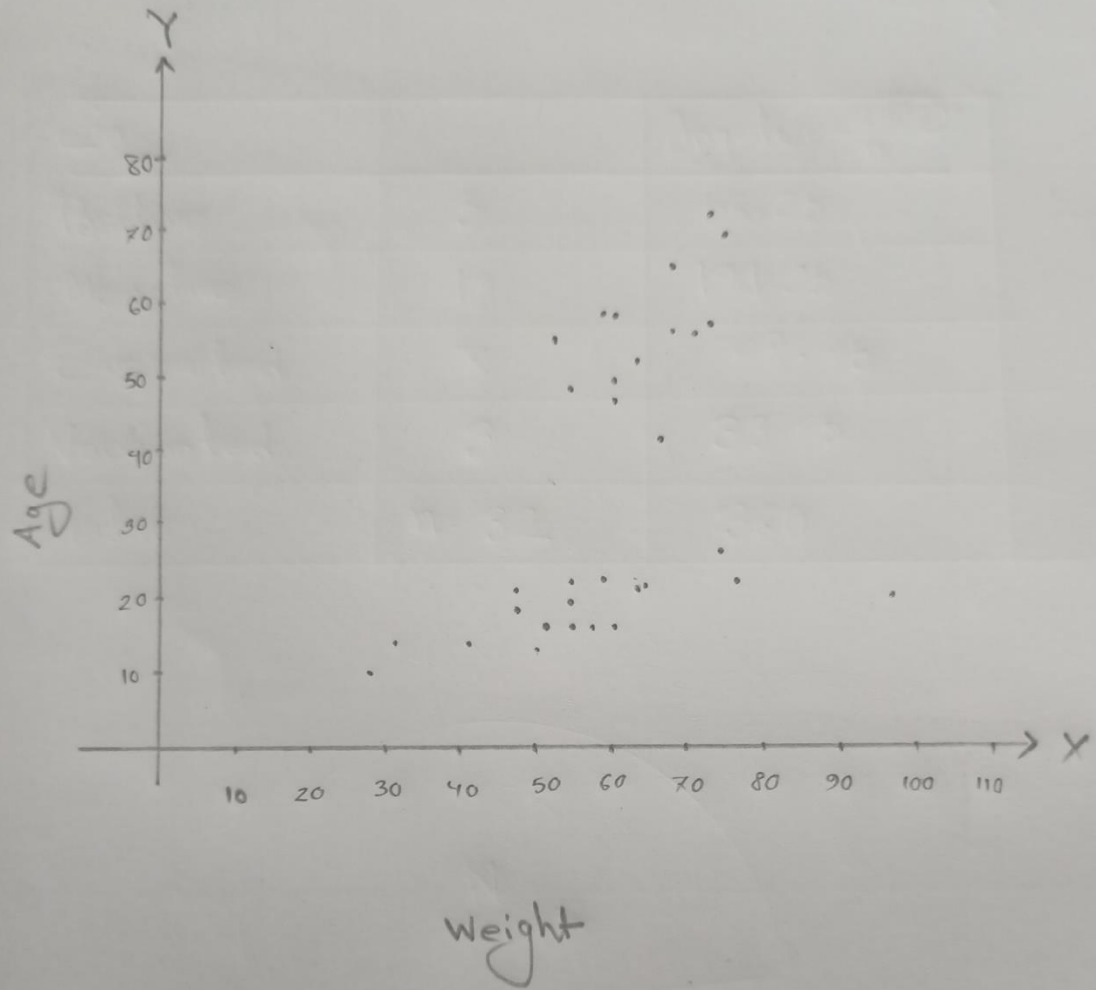
Answer to the Question no -5

Height

Class Interval	Frequency(f_1)	Mid Value x_1	f_1x_1	$f_1\|x_1 - \bar{x}\|$	$f_1(x_1 - \bar{x})^2$
80-96	1	88	88	66	4356
96-112	0	104	0	0	0
112-128	1	120	120	34	1156
128-144	2	136	272	36	648
144-160	16	152	2432	32	64
160-176	12	168	2016	168	2352
Total	N=32		4928	336	11876

Mean , $\bar{x} = \frac{\sum f_1 x_1}{n} = \frac{4928}{32} = 154$

MD $= \frac{\sum f_1 |x_1 - \bar{x}|}{n} = \frac{336}{32} = 10.5$

Variance, $\sigma^2 = \frac{\sum f_1 (x_1 - \bar{x})^2}{n} = \frac{11876}{32} = 371.125$

Standard Deviation, SD$=\sqrt{Variance} = \sqrt{371.125} = 19.26$

Coefficient of variation, CV$=\frac{\text{Standard Deviation}}{\bar{x}} \times 100 = \frac{19.26}{154} \times 100 = 12.50\%$

Age

Class Interval	Frequency(f_1)	Mid Value x_1	f_1x_1	$f_1\,|x_1-\bar{x}|$	$f_1\,(x_1-\bar{x})^2$
10-20	10	15	150	200	4000
20-30	8	25	200	80	800
30-40	0	35	0	0	0
40-50	4	45	180	40	400
50-60	7	55	385	140	2700
60-70	2	65	130	60	1800
70-80	1	75	75	40	1600
Total	N=32		1120	560	11300

Mean , $\bar{x} = \frac{\Sigma f_1 x_1}{n} = \frac{1120}{32} = 35$

MD $= \frac{\Sigma f_1\,|x_1-\bar{x}|}{n} = \frac{560}{32} = 17.5$

Variance, $\sigma^2 = \frac{\Sigma f_1\,(x_1-\bar{x})^2}{n} = \frac{11300}{32} = 353.125$

Standard Deviation, SD $= \sqrt{Variance} = \sqrt{353.125} = 18.80$

Coefficient of variation, CV $= \frac{\text{Standard Deviation}}{\bar{x}} \times 100 = \frac{18.80}{35} \times 100 = 53.71\%$

Age>Height

So, Age variable is more variability than Height variable.