

Computational Statistics And Probability

Midterm Assignment

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20-42195-1

Primary data:

Division	Gender	Age	Height	Weight	Education Level	Occupation	Covid-19 information
Dhaka	M	46	174	82	16	Teacher	Pos
Dhaka	F	17	162	43	11	Student	Neg
Dhaka	F	43	168	53	12	Housewife	Neg
Dhaka	M	15	162	54	10	Student	Neg
Dhaka	M	12	150	46	7	Student	Neg
Dhaka	M	44	168	74	16	Shopkeeper	Pos
Dhaka	F	15	158	40	10	Student	Neg
Dhaka	F	41	163	51	12	Housewife	Neg
Dhaka	F	10	146	41	5	Student	Pos
Dhaka	M	38	165	69	15	Teacher	Neg
Dhaka	M	35	160	48	12	Shopkeeper	Neg
Dhaka	F	7	135	27	2	Student	Pos
Mymensingh	F	7	132	25	2	Student	Neg
Mymensingh	M	10	143	36	5	Student	Neg
Mymensingh	M	40	161	67	16	Bankmanager	Pos
Mymensingh	F	36	153	44	12	Shopkeeper	Neg
Khulna	F	5	115	20	1	Student	Neg
Khulna	F	30	158	63	16	Businessman	Neg
Khulna	M	7	99	29	1	Student	Pos
Khulna	M	33	164	68	16	Teacher	Neg

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20-42195-1

Division	Gender	Age	Height	Weight	Education Level	Occupation	Covid-19 information
Rangpur	F	36	152	49	8	Housewife	Neg
Rangpur	M	40	157	58	12	Business man	Pos
Rangpur	M	9	132	36	4	Student	Neg
Rangpur	F	8	120	28	3	Student	Neg
Sylhet	M	50	165	54	16	Teacher	Neg
Sylhet	M	22	160	48	14	Student	Neg
Sylhet	F	47	159	51	12	Housewife	Pos
Sylhet	F	20	152	47	13	Student	Pos
Chittagong	M	56	170	70	8	Bank manager	Neg
Chittagong	F	54	167	65	5	Teacher	Pos
Chittagong	M	24	162	60	16	Civil officer	Pos
Chittagong	F	22	160	56	14	Student	Neg
Rajshahi	F	60	164	64	15	Housewife	Neg
Rajshahi	M	64	166	68	16	Business man	Neg
Rajshahi	M	30	169	72	15	Teacher	Pos
Rajshahi	F	28	160	63	15	Housewife	Neg
Barisal	M	48	172	76	12	Labour	Pos
Barisal	F	45	171	72	10	Housewife	Neg
Barisal	F	18	163	55	12	Student	Neg
Barisal	M	15	158	62	16	Student	Pos

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Answer to the question no 1:

Class Interval of age	Tally	Frequency
0-10		6
10-20		8
20-30		5
30-40		7
40-50		9
50-60		3
60-70		2
Total		40

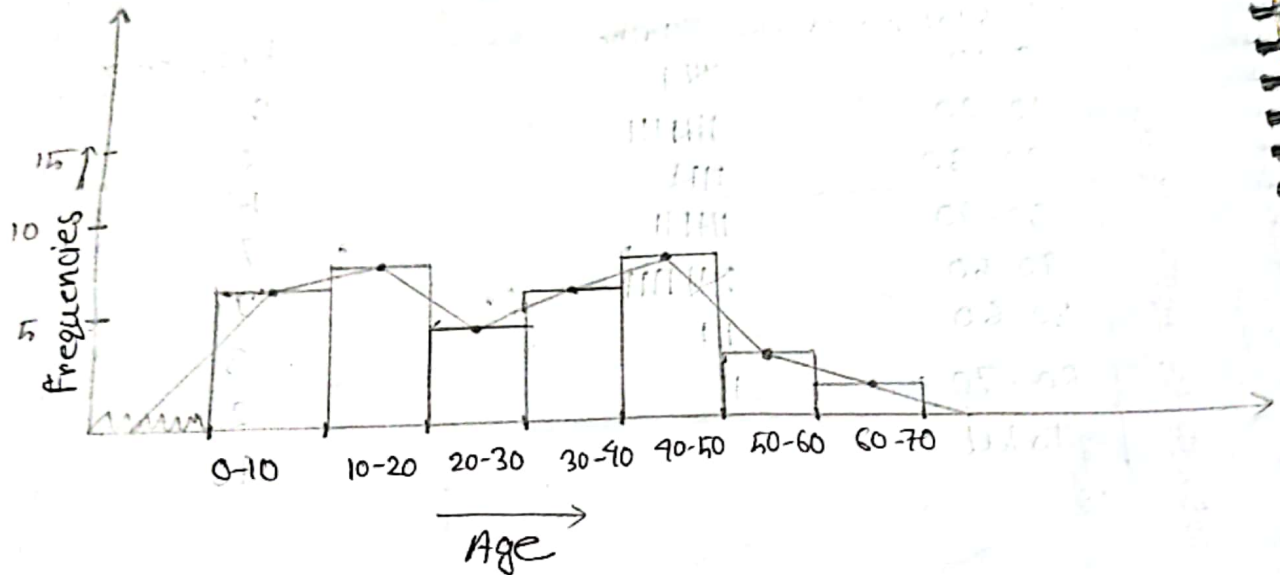
Answer to the question no 2:

Age difference	Frequency	Midpoint
0-10	6	5
10-20	8	15
20-30	5	25
30-40	7	35
40-50	9	45
50-60	3	55
60-70	2	65

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Draw of a Histogram and frequency curve:



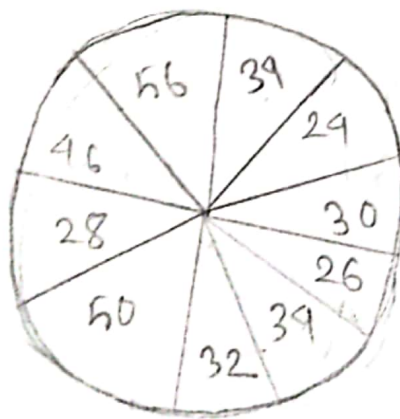
Now, I write the comment which is one the shape of age:

This is a smoot graph which is plotted against the mid value. After connecting the midpoint of the tops, it obtain. The curves shows us that the age of 40-50 years is the most people around me. Then 10-20 years is the second highest. At first, curve is increase then little bit decrease, then increase and at last it decrease.

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Answer to the question no 3:

Family number	Education level of family member	Angles
F ₁	12	29
F ₂	15	30
F ₃	13	26
F ₄	17	39
F ₅	16	32
F ₆	25	50
F ₇	14	28
F ₈	23	46
F ₉	28	56
F ₁₀	27	39
Total	180	360

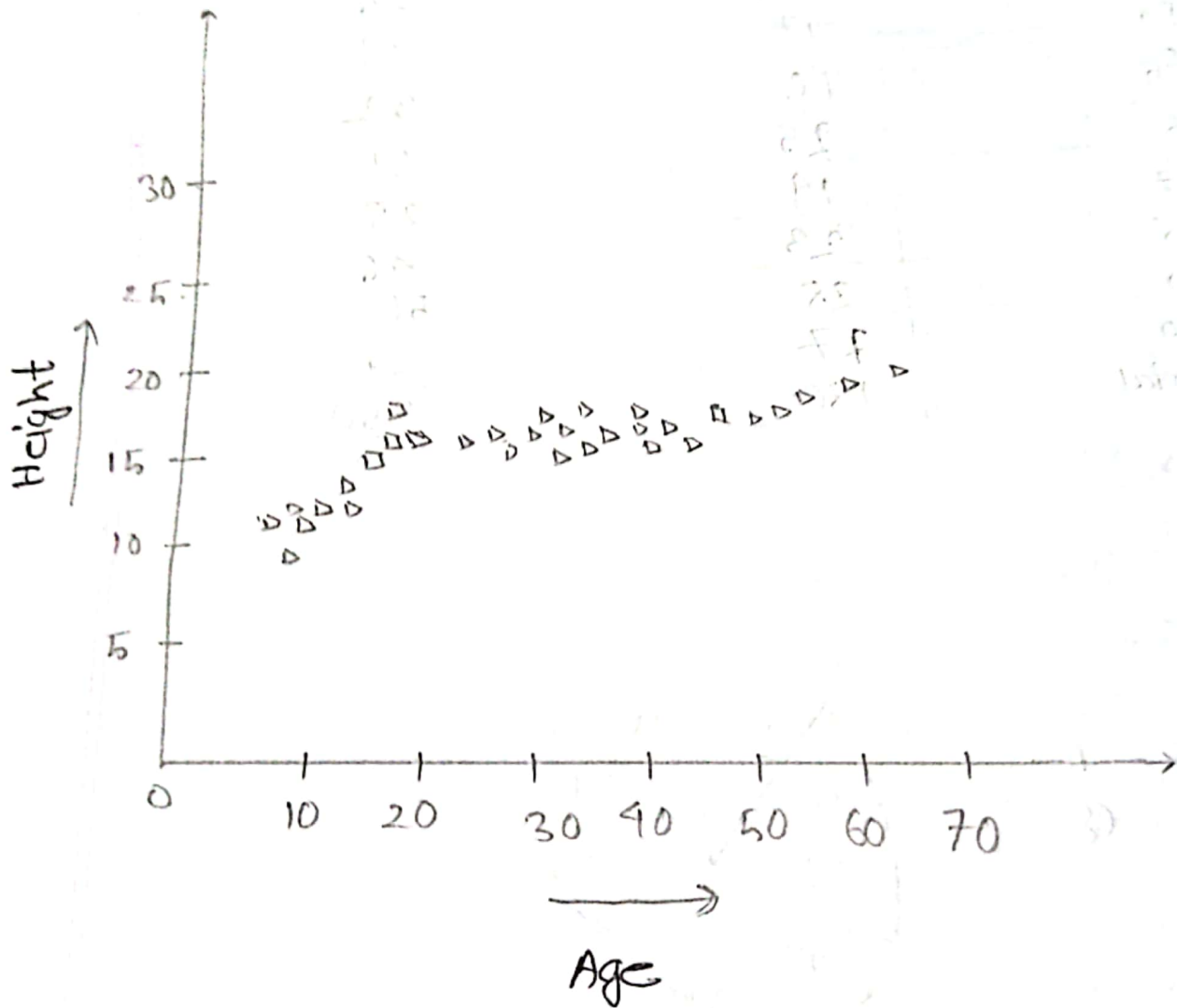


Pie Diagram

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Answer to the question no 4:

Here, i take 1 point = 10 cm



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Answer to the question no 5:

Class	f	x	fx	f log x	f/x
0-10	6	5	30	6 log 5	1.2
10-20	8	15	120	8 log 15	0.53
20-30	5	25	125	5 log 25	0.2
30-40	7	35	245	7 log 35	0.2
40-50	9	45	405	9 log 45	0.2
50-60	3	55	165	3 log 55	0.54
60-70	2	65	130	2 log 65	0.03
Total	40		1220	55.13	2.9

Calculation of appropriate measures of central tendency:

$$AM: \bar{x} = \frac{1220}{40} = 30.5$$

$$GM: \bar{x}_G = \text{Antilog} \left(\frac{55.13}{40} \right) = 23.89$$

$$HM: \bar{x}_H = \frac{40}{2.9} = 13.79$$