INDIAN SCHOOL AL WADI AL KABIR

Class X, Mathematics - **Statistics**

01-10-2020

Q.1. Find the mode of the following frequency distribution :

Marks	10 – 20	20 – 30	30 – 40	40 – 50	50 – 60
Number of students	15	30	45	12	18

Q.2. If the mean of the following data is 21.5, find the value of k.

Class	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50
Frequency	6	4	3	k	2

Q.3. The weights (in kg) of 50 wrestlers are recorded in the following table :

Weight (in kg)	100 – 110	110 – 120	120 – 130	130 – 140	140 – 150
Number of wrestlers	4	14	21	8	3

Find the average weight of the wrestlers.

Q.4. If the median of the distribution given below is 27. Find the values of x and y.

Class	Frequency
0 – 10	5
10 – 20	x
20 – 30	20
30 – 40	14
40 – 50	y
50 – 60	8
Total	68

Q.5. An aircraft can have 120 passengers. The number of seats occupied during 100 flights is given in the following table :

Number of seats	100 – 104	104 – 108	108 – 112	112 – 116	116 – 120
Frequency	15	20	32	18	15

Determine the mean number of seats occupied over the flights.

Q.6. Find the unknown entries a, b, c, d, e and f in the following distribution of heights of students in a class :

Height in cm	Frequency	Less than type C f
150 – 155	12	a
155 – 160	b	25
160 – 165	10	c
165 – 170	d	43
170 – 175	e	48
175 – 180	2	f
Total	50	

Q.7. The mean of the following data is 42. Find the missing frequencies x and y if the total frequency is 100 :

Classes	Frequency
0 – 10	7
10 – 20	10
20 – 30	x
30 – 40	13
40 – 50	y
50 – 60	10
60 – 70	14
70 – 80	9

Q.8. Find the mode of a grouped data if its mean and median are 17 and 19 respectively, using the relationship connecting three measures of central tendancy.

Q.9. Find the mode of the following data :

Marks	Number of students
Below 10	8
Below 20	20
Below 30	45
Below 40	58
Below 50	70

Q.10. If the median of the following data is 240, then find the value of f :

Classes	Frequency
0 – 100	15
100 – 200	17
200 – 300	f
300 – 400	12
400 – 500	9
500 – 600	5
600 – 700	2

Q.11. Find the difference of the upper limit of the median class and the lower limit of the modal class of the following data.

Class	Frequency
65 – 85	4
85 – 105	5
105 – 125	13
125 – 145	20
145 – 165	14
165 – 185	7
185 – 205	5

Q.12. Find the mean marks from the following data :

Marks	Number of students
Below 10	5
Below 20	16
Below 30	35
Below 40	65
Below 50	80

Q.13. The mean of the following distribution is 62.8.

Class	Frequency
0 – 20	5
20 – 40	8
40 – 60	f
60 – 80	12
80 – 100	7
100 – 120	8

Find the missing frequency 'f' and hence find the mode of the above data.

Q.14. Find the median for the following distribution :

Classes	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50
Frequencies	6	10	12	8	8

Q.15. Write the relationship connecting three measures of central tendencies. Hence find the median of the given data if mode is 24.5 and mean is 29.75.

Answers

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1	33.125	**2**	k= 5	**3.**	124.84	**4**	x = 15, y = 6
5	109.92	**6**	a = 12, b = 13 c = 35, d = 8 e = 5, f = 50	**7**	x = 12, y = 25	**8**	Mode = 23
9	Mode = 25.2	**10**	f = 20	**11**	Difference = 20	**12**	39.875
13	f = 10, Mode = 65.71	**14.**	Median = 25	**15.**	Median = 28	16.	

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