OUR OWN HIGH SCHOOL, AL WARQA'A, DUBAI.
GRADE: X WORK SHEET - STATISTICS

ASSIGNMENT: 1

1. If the mean of the following frequency distribution is 14, find the value of k: (ans: 6)

Class marks	5	10	15	20	25
Frequency	7	k	8	4	5

2. Use the step-deviation method to find the mean of the following frequency distribution: (ans: 62.55)

Class interval	0-20	20-40	40-60	60-80	80-100	100-120
Frequency	20	35	52	44	38	31

3. Find the missing frequencies in the following frequency distribution, if mean is 27.2 (ans: $f_1 = 8$, $f_2 = 13$)

Class interval	0 - 10	10-20	20 - 30	30 - 40	40 – 50	Total
Frequency	7	f_1	12	f_2	10	50

4. Find the mean marks of students from the following cumulative frequency table: (ans: 51.75)

Marks	0 and above	10 and above	20 and above	30 and above	40 and above	50 and above	60 and above	70 and above	80 and above	90 and above	100 and above
No. of students	80	77	72	65	55	43	28	16	10	8	0

5. Find the value of p if the mean of the following distribution is 18: (ans: $p = 1$)

x	13	15	17	19	$20 + p$	23
f	8	2	3	4	$5p$	6

6. The following table gives the distribution of expenditure of different families on education. Find the mean, median and mode of the data and interpret the answer. (ans: 2662.5, 2553.57, 1847.83)

Expenditure (in Rs)	1000 - 1500	1500 - 2000	2000 - 2500	2500 - 3000	3000 - 3500	3500 - 4000	4000 - 4500	4500 - 5000
No of families	24	40	33	28	30	22	16	7

7. Find the median and the mode from the following data: (ans: 48.44, 48)

Marks	Below 10	Below 20	Below 30	Below 40	Below 50	Below 60	Below 70	Below 80	Below 90	Below 100
No. of students	5	9	17	29	45	60	70	78	83	85

ASSIGNMENT: 2

8. The median of the following data is 32.5

Class interval	0 - 10	10 - 20	20 – 30	30 – 40	40 - 50	50 – 60	60 - 70	Total
Frequency	x	5	9	12	y	3	2	40

Find the values of x and y and hence find the mode. (ans; $x = 3$, $y = 6$, 33.3)

9. Compute the median from the following data: (ans: 153.79)

Mid value	115	125	135	145	155	165	175	185	195
Frequency	6	25	48	72	116	60	38	22	3

10. To find the concentration of SO_2 in the air (in parts per million, *i.e* ppm), the data was collected for 30 localities in a certain city and is presented below:

Concentration of SO_2 (in ppm)	0.00 - 0.04	0.04 - 0.08	0.08 - 0.12	0.12 - 0.16	0.16 - 0.20	0.20 - 0.24
Frequency	4	8	9	3	4	2

Find the mean median and mode for the data. (ans: 0.0987, 0.093, 0.083)

11. The following table gives production yield per hectare of wheat of 100 farms of a village.

Production yield (in Rs)	50 - 55	55 – 60	60 - 65	65 - 70	70 - 75	75 - 80
Number of farms	2	8	12	24	38	16

Draw a less than type ogive for the data and obtain the median from the graph and verify the result using formula.

12. The following distribution gives the state-wise teacher-student ratio in higher secondary schools in India.

No. of students per teacher	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 – 45	45 - 50	50 – 55
No. of states	3	8	9	10	4	3	2	1

Draw both less than and more than types of ogive for the data and find the median from the graph.

13. During the medical check up of 35 students of a class, their weights were recorded as follows:

Weight (in Kg)	Less than 38	Less than 40	Less than 42	Less than 44	Less than 46	Less than 48	Less than 50	Less than 52

No. of students	0	3	5	9	14	28	32	35

Draw a more than type ogive for the data and find the median from the graph.

Mathematics Department

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