



# INDIAN SCHOOL AL WADI AL KABIR

Department: Mathematics

Class X

Worksheet – STATISTICS

## Questions of 2 marks each

Q.1.

The daily wages (in rupees) of 100 workers in a factory are given below.

Daily wages (₹)	125	130	135	140	145	150	160	180
No. of workers	6	20	24	28	15	4	2	1

Find the median wages of a worker for the above data.

Q.2.

The mean of 100 observations are 49. It was discovered that three items which should have been 60, 70, 80 were wrongly read as 40, 20, 50 respectively. Then find the correct mean.

Q.3.

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

Q.4.

Find  $x$  and  $y$  from the following cumulative frequency distribution.

Classes	Frequency	c.f.
0-8	15	15
8-16	$x$	28
16-24	15	43
24-32	18	$y$
32-40	9	70

Q.5.

In a class test, the mean score of the class is 60. Half the students of the class scored 80 marks or above in the test.

Dipti said, “Each of the remaining half of the students would have definitely got 40 marks or below in the test for the mean to be 60 marks”.

Prove or disprove Dipti’s statement with a valid example. **(Competency Based Question).**

## Questions of 3 marks each

Q.6.

The following distribution gives the daily income of 50 workers of a factory.

Daily income (in Rupees)	250–300	300–350	350–400	400–450	450–500
Number of workers	12	14	8	6	10

Find the mean for the above data.

**Q.7.** The frequency distribution of daily rainfall in a town during a certain period is shown below.

Rainfall(in mm)	Number of days
0 – 20	7
20 – 40	x
40 – 60	10
60 – 80	4

Unfortunately, due to errors, the information on the 20 – 40 mm range got deleted from the data.

If the mean daily rainfall for the period was 35 mm, find the number of days when the rainfall ranged between 20 – 4 mm. Show your work.**(Competency Based Question).**

**Q.8.** The following table gives the height of trees:

Height	No. of trees
Less than 7	26
Less than 14	57
Less than 21	92
Less than 28	134
Less than 35	216
Less than 42	287
Less than 49	341
Less than 56	360

Find mode for the given data.

**Q.9.** The mean temperature of a certain city for 31 consecutive days was found to be  $35.7^{\circ}\text{C}$ . Further, the mean temperature of the first 8 days was  $28.4^{\circ}\text{C}$ . The mean temperature of the next 12 days was  $36.4^{\circ}\text{C}$ . Find the mean temperature of the rest of the days. **(Competency Based Question).**

**Q.10.** Find the value of x and y if the median for the following data is 31.

CI	0–10	10–20	20–30	30–40	40–50	50–60	Total
Frequency	5	x	6	y	6	5	40

**Questions of 5 marks each**

**Q.11.** The following table gives the life time of 200 bulbs. Calculate the mean life time of a bulb.

Life time (in hours)	400-499	500-599	600-699	700-799	800-899	900-999
Number of bulbs	24	47	39	42	34	14

**Q.12.** The mean of the following distribution is 18. Find the frequency  $f$  of the class 19 – 21.

Class	11–13	13–15	15–17	17–19	19–21	21–23	23–25
Frequency	3	6	9	13	$f$	5	4

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

Weight (in kg)	Number of students
Less than 38	0
Less than 40	3
Less than 42	5
Less than 44	9
Less than 46	14
Less than 48	28
Less than 50	32
Less than 52	35

Obtain the mean weight, median and mode for the above data.

**Q.14.** Find the median of the following data :

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

**Q.15.** Find mean, median and mode for the following distribution.

Class	0-10	10-20	20-30	30-40	40-50
Frequency	5	27	58	20	10

**ANSWERS**

<b>1.</b>	137.50	<b>2.</b>	50	<b>3.</b>	28	<b>4.</b>	$x = 13, y = 61$
<b>5.</b>	Dipti's claim is not correct	<b>6.</b>	363	<b>7.</b>	$x = 63$	<b>8.</b>	33.49
<b>9.</b>	40.2°C	<b>10.</b>	$x = 8, y = 10$	<b>11.</b>	678	<b>12.</b>	8
<b>13.</b>	45.8, 46.5, 46.94	<b>14.</b>	153.79	<b>15.</b>	25.25, 24.82, 24.49		