



INDIAN SCHOOL AL WADI AL KABIR

Class: XI	Department: Commerce
Worksheet No: 1	Topic: Measures of Central Tendency

- The ----- is the middle element when the data set is arranged in order of the magnitude.
 - Mean
 - Median
 - Quartile
 - Mode
 - Median divides the series into how many parts:
 - 2
 - 3
 - 4
 - None of these
 - For a symmetrical distribution, median = 30 and mode = 35. What is the value of the mode?
 - 0
 - 30
 - 32.5
 - 27.5
 - From the following data, what is the value of the median?
20 21 25 26 23 29 32 39 33
 - 26
 - 23
 - 25.22
 - 29
 - Which of the following diagrams is used to find the value of mode graphically?
 - Pie chart
 - Bar graph
 - Histogram
 - None of the above
 - is the most commonly used measures of central tendency.
 - Mean
 - Mode
 - Quartile
 - Median
-

7. Arithmetic mean is defined as the sum of the values of all observations divided by the ----
(Number of observations)
8. The sum of deviations of items about arithmetic mean is always equal to -----
a. One
b. Zero
c. Infinity
d. None of these
9. When the values in a series do not have equal importance, we calculate the _____.
a. Mode
b. Weighted mean
c. Arithmetic mean
d. None of the above
10. To calculate the median, all the items of a series have to be arranged in a/an _____.
a. Descending order
b. Ascending order
c. Ascending or descending order
d. None of the above
11. Mode refers to the value within a series that occurs _____ number of times.
a. Maximum
b. Minimum
c. Zero
d. Infinite
12. What is the mean of the following numbers: 23, 45, 87, 40, 50?
a. 49
b. 34
c. 56
d. None of the above
13. Which of the following is a characteristic of a mean?
a. The sum of deviations from the mean is zero
b. It minimises the sum of squared deviations
c. It is affected by extreme scores
d. All of the above
14. Below are the observations of the marks of a student. What is the value of mode?
84 85 89 92 93 89 87 89 92
a) 92
b) 9
c) 93
d) 89
15. Show that the sum of deviations of the values of the variables from their AM is always equal to zero.

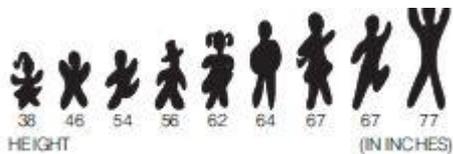
$$A: \sum (X - \bar{X}) = 0$$

X	(X - \bar{X})
10	-20
20	-10
30	0
40	10
50	20
$\sum X = 150$	$\sum (X - \bar{X}) = 0$

$\bar{X} = \frac{\sum X}{N} = \frac{150}{5} = 30$. When the sum of the deviations from the arithmetic mean, i.e. ,30 is taken it comes out to be 0.

CASE BASED QUESTIONS:

Direction Read the following case study and answer questions on the basis of the same.



- What is the mean height of the above students?
 - 54
 - 59
 - 62
 - 67
- Median of a given series divides the data into parts.
 - two
 - three**
 - four
 - None of these
- What will be the median value of the above figure?
 - 52
 - 56
 - 62
 - 65
- If we reverse the data in decreasing order, value of median will be
 - 52
 - 55
 - 64
 - None of the above
- What will be the mode value in the above series?
 - 54
 - 59

(c) 67

(d) Can't be determined

NUMERICAL EXAMPLE:

1. Find average for following individual data.

2	3	5	6	8	10	11	13	17	20
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Calculating the average using direct method:

(Ans: 9.5)

2. Daily income of 10 families is given as follows:

S. No.	1	2	3	4	5	6	7	8	9	10
Daily Income (in ₹,')	100	120	80	85	95	130	200	250	225	275

Calculate average daily income

(Ans: Rs 156)

3. Compute the mean marks obtained by the students from the following data:

Marks	0-10	10-20	20-30	30-40	40-50
No. of Students	4	6	10	20	10

(Ans:30.2)

4. Find mean for the following data by using:

(i) Direct Method; (ii) Short-cut Method; (iii) Step Deviation Method.

X	100-200	200-300	300-400	400-500	500-600
f	10	18	12	20	40

(Ans: 412)

5. From the following data, calculate the weighted mean.

Marks	62	77	65	62	57
Weights	2	1	2	3	4

(Ans: 62.08)

6. Find out median of the following series:

Size	20	25	30	35	40	45	50	55
Frequency	14	18	33	30	20	15	13	7

(Ans:35)

7. Find out median of the following series:

Items	20-30	30-40	40-50	50-60	60-70	70-80	80-90
Frequency	5	10	16	18	12	10	8

(Ans: 54.7)