# MATHS

# BOOKS - BEYOND PUBLICATION

# STATISTICS

## Example

**1.** The mean value can be calculated from both ungrouped and grouped date . Which one you think is more accurate ? Why ?

**2.** When it is more conveninet to use grouped

date for analysis ?

**3.** Is the result obtained by all the three

methods the same when finding the mean ?

**4.** If $x_i$ and $f_i$ are sufficiently samll , then which method is an appropriate choice ?

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**5.** If $x_i$ and $f_i$ are numerically large numbers , then which methods are appropriate to use ?

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**6.** The marks obtained in mathematics by 30 students of Class X of a certain school are given in table below. Find the mean of the marks obtained by the students.

**7.** The distribution below shows the number of wickets taken by bowlers in one day cricket matches. Find the mean number of wickets by

choosing a suitable method. What does the mean signify?

| Number of wickets | 20 – 60 | 60 – 100 | 100 – 150 | 150 – 250 | 250 – 350 | 350 – 450 |
|---|---|---|---|---|---|---|
| Number of bowlers | 7 | 5 | 16 | 12 | 2 | 3 |

8. A survey was conducted by a group of students as a part of their environmental awareness programme, in which they collected the following data regarding the number of plants In 20 houses in a locality. Find the mean

number of plants per house.

| Number of plants | 0 – 2 | 2 – 4 | 4 – 6 | 6 – 8 | 8 – 10 | 10 – 12 | 12 – 14 |
|---|---|---|---|---|---|---|---|
| Number of houses | 1 | 2 | 1 | 5 | 6 | 2 | 3 |

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**9.** Consider the following distribution of daily wages of 50 workers of a factory.



find the mean daily wages of the workers of the factory by using an appropriate method.

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10. The table below shows the daily expenditure on food of 25 households in a locality.



Find the mean daily expenditure on food by a suitable method.

11. To find out the concentratin of $SO_2$ in the air (in parts per million, i.e., ppm), the data was collect for 30 localities in a certain city and is

presented below.



Find the mean concentration of $SO_2$ in the air.

**12.** A class teacher has the following attendance record of 40 students of a class for the whole term. Find the mean number of days a student was present out of 56 days in the term.

**13.** The following table gives the literacy rate(in percentage) of 35 cities. Find the mean literacy rate.

**14.** Find the mode of the following data. 5, 6, 9, 10, 6, 12, 3, 6, 11, 10, 4, 6, 7.

**15.** Find the mode of the following data.

20,3,7,13,3,4,6,7,19,15,7,18,3

**16.** Find the mode of the following data.

2 , 2, 2 , 3, 3, 3, 4, 4, 4 , 5 , 5, 5, 6, 6 , 6,.

**17.** Is the mode always at the centre of the data ?

**18.** Does the mode change , if another observation is added to the data in Example ? Comment .

**19.** If the maximum value of an observation in the data in example 4 is changed to 8, would be the mode of the data be affected? Comment.

**20.** It depends upon the demand of the situation whether we are intersted in finding the acerage marks obtained by the students or the marks obtained by most of the students

.

What do we find in the first situation ?

**21.** It depends upon the demand of the situation whether we are intersted in finding the acerage marks obtained by the students or the marks obtained by most of the students .

What do we find in the second situation ?

**22.** It depends upon the demand of the situation whether we are intersted in finding the acerage marks obtained by the students or the marks obtained by most of the students .

What do we find in the first situation ?

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**23.** The wickets taken by a bowler in 10 cricket matches are as follows: 2 , 6 , 4 , 5 , 0 , 2 ,1, 3 ,2

,3. Find the mode of the date .

**24.** A survey conducted on 20 households in a locality by a group of students resulted in the following frequency table for the number of family members in a household.



Find the mode of this data.

**25.** The marks distribution of 30 students in a mathematics examination are given in the adjacent table. Find the mode of this data. Also, compare and interpret the mode and the mean.

**26.** The following table shows the ages of the patients admitted in a hospital during a year:

**27.** The following data gives the information on the observed life times (in hours) of 225 electrical components:



Determine the modal life times of the components.

**28.** The followinig data gives the distribution of total monthly household expenditure of 200 families of Gummadidala village. Find the modal monthly expenditure of the families. Also fing the mean monthly expenditure.

| Expenditure (₹) | 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 |

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**29.** The following distribution gives the state-wise teachers, student ratio in higher

secondary schools of India. Find the mode and mean of this data. Interpet the two measures.

| No.of students | 15 – 20 | 20 – 25 | 25 – 30 | 30 – 35 | 35 – 40 | 40 – 45 | 45 – 50 | 50 – 55 |
|---|---|---|---|---|---|---|---|---|
| No.of states | 3 | 8 | 9 | 10 | 3 | 0 | 0 | 2 |

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**30.** The given distribution shows the number of runs scored by some top batsman of the world in one international cricket matches.



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**31.** A student noted the number of cars passing through a spot on a road for 100 periods, each of 3 minutes and summarised this ini the table given below.

| No.of cars | 0 – 10 | 10 – 20 | 20 – 30 | 30 – 40 | 40 – 50 | 50 – 60 | 60 – 70 | 70 – 80 |
|---|---|---|---|---|---|---|---|---|
| Frequency | 7 | 14 | 13 | 12 | 20 | 11 | 15 | 8 |

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**32.** A survey regarding the heights (in cm) of 51 girls of Class X of a school was conducted and data was obtained as shown in table. Find

their median

**33.** The median of the following data is 525. find the values of x and y, if the total frequency is 100. Here, Cl stands for class interval and Fr for frequency.

**34.** If the median of 60 observationss, give below is 28.5, find the value of x and y.

**35.** A life insurance agent found the following data about distribution of ages of 100 policy holders. Calculate the median age.(policies are given only to perosns having age 18 years onwards but less than 60 years.)

we find the class intervals and thier corresponding frequencies to calculate the median age.

**36.** The lengths of 40 leaves of a plant are measured correct to the nearest millimetre and the data obtained is represented in the following data:



Find the median length of the leaves

The data needs to be converted to continuous classes for findinig the median, since the formula assumes continuous classes. The classes then change to 117.5-126.5, 126.5-135.5,...........171.5-180.5)

**37.** The following table gives the distribution of the life time of 400 neon lamps



Find the median life time of a lamp.

**38.** 100 surnames were randomly picked up from a local telephone directory and the frequency distribution of the number of letters in the English alphabet in the surnames was obtained as follows:



Determine the median number of letters in the surnames. Find the mean number of letter in the surnames?Also, find the modal size of the surnames.

**39.** The distribution below gives the weights of 30 students of a class. Find the median weight of the students.

**40.** The Median of the data K/6, K/4, K, K/3, K/2 is 14. Then find the "K"value.

**41.** If the Mean and median of a data are 32.5 and 37.62 respectively. Find the mode of the data.

**42.** Find the mean when the median is 72.8 mode is 65.

**43.** Find the median of the data given below:

14, 18, 9, 21, 15, 20, 16, 6

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**44.** Find the Median for the following data 30, 17, 12, 21, 33, 22

Ascending order: 12, 17, 21, 22, 30, 33

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**45.** Find the mode of the following data.

20,3,7,13,3,4,6,7,19,15,7,18,3

**46.** If the median of 60 observations, given below is 28.5 find the value of x and y.

**47.** The mean of x+y observations is x-y find the sum of all the observations. Give mean of x + y observations is x - y.

we know x = $\dfrac{\Sigma f_i u_i}{f_i}$

**48.** Find the medain and mode of the following observation. 12,5,9,6,14,9 and 8.

**49.** Write the formula for calculating 'Arithmetic mean'. In step deivation method and explain each letter in it.

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**50.** For the following data if the Median of 60 observation is 28.5 find the values of x and y.



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**51.** Find the mean of 5,6,9,10,6,12,3,6,11,10.

**52.** Write the formula for the median of a grouped data. Explain symbol with their used meaning.

**53.** Find the median of 5, 3, 1, $-4$, 6, 7, 0.

**54.** Find the mode of 5, 6, 9, 6, 12, 3, 6, 11, 6, 7.

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**55.** Find the mean of first 'n' natural numbers.

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**56.** Consider the following distribution of daily wages of 50 workers of a factory.

find the mean daily wages of the workers of the factory by using step deviation method.

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**57.** Find the mean daily wages of the workers of the factory for using an appropriate method In Rupees



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**58.** Find the Mode following data

| Class-Intervals | 1 - 4 | 4 - 7 | 7 - 10 | 10 - 13 | 13 - 16 |
|---|---|---|---|---|---|
| Frequency | 6 | 30 | 40 | 16 | 4 |

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**59.** Find the Mode of the following data

| Class Intervals | 10 - 20 | 20 - 30 | 30 - 40 | 40 - 50 | 50 - 60 | 60 - 70 |
|---|---|---|---|---|---|---|
| Frequency | 10 | 16 | 30 | 42 | 17 | 20 |

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**60.** Find the Mode of following data

| Class Intervals | 5 - 10 | 10 - 15 | 15 - 20 | 20 - 25 | 25 - 30 | 30 - 35 |
|---|---|---|---|---|---|---|
| Frequency | 10 | 20 | 35 | 5 | 21 | 06 |

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**61.** Find the Mode of following data

| Class Intervals | 6 - 12 | 12 - 18 | 18- 24 | 24- 30 | 30 - 36 |
|---|---|---|---|---|---|
| Frequency | 10 | 15 | 21 | 06 | 08 |

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**62.** 100 surnames were randomly picked up from a local telephone directory and the frequency distribution of the number of letters in the English alphabet in the surnames was obtained as follows

| No. of Letters | 1 - 4 | 4 - 7 | 7- 10 | 10 - 13 | 13 - 16 | 16 - 19 |
|---|---|---|---|---|---|---|
| No. of surnames | 6 | 30 | 40 | 16 | 4 | 4 |

Determine Median number of letters in the surnames

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**63.** The distribution below gives the weights of 40 students of a class. Find the median weight of the students.

| No. of Letters | 1 - 4 | 4 - 7 | 7 - 10 | 10 - 13 | 13 - 16 | 16 - 19 |
|---|---|---|---|---|---|---|
| No. of surnames | 6 | 30 | 40 | 16 | 4 | 4 |

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**64.** Find the median of the following data

| Class Interval | 10-60 | 60-110 | 110-160 | 160-210 | 210-260 | 260-310 |
|---|---|---|---|---|---|---|
| Frequency | 8 | 20 | 28 | 30 | 10 | 4 |

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**65.** Find the median of following data

| Class Interval | 30-50 | 50-70 | 70-90 | 90-110 | 110-130 | 130-150 |
|---|---|---|---|---|---|---|
| Frequency | 5 | 6 | 10 | 3 | 2 | 16 |

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**66.** Find the median of 5, 3, 1, $-4$, 6, 7, 0.

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**67.** Find the mean of 5,6,9,10,6,12,3,6,11,10.

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**68.** Find the mode of 5,6,5,11,12,12,5,5,1,0,2,3

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**69.** Find the mode of the following data

| Monthly consumption | 60–80 | 80–100 | 100–120 | 120–140 | 140–160 | 160–180 | 180–200 |
|---|---|---|---|---|---|---|---|
| No. of Consumers | 8 | 10 | 16 | 20 | 14 | 6 | 5 |

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**70.** Find the mode of following data

| Size of family | 1–3 | 3–5 | 5–7 | 7–9 | 9–11 |
|---|---|---|---|---|---|
| No. of Families | 6 | 7 | 9 | 2 | 1 |

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**71.** Find the mean of following data

| Daily Wages | 200–250 | 250–300 | 300–350 | 350–400 | 400–450 |
|---|---|---|---|---|---|
| No. of Workers | 6 | 8 | 14 | 10 | 12 |

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**72.** Find the median of the following data

| Class Interval | 10–25 | 25–40 | 40–55 | 55–70 | 70–85 | 85–100 |
|---|---|---|---|---|---|---|
| Frequency | 2 | 3 | 7 | 6 | 6 | 6 |

**73.** Find the mode of the following data

| Class Interval | 5–10 | 10–15 | 15–20 | 20–25 | 25–30 |
|---|---|---|---|---|---|
| Frequency | 6 | 5 | 1 | 3 | 5 |

**74.** Find the mean of the following data

| No.of Oranges | 10–15 | 15–20 | 20–25 | 25–30 | 30–35 |
|---|---|---|---|---|---|
| No. of Baskets | 7 | 6 | 5 | 1 | 10 |

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**75.** Find the mean for the following data

| Class Interval | 0-20 | 20-40 | 40-60 | 60-80 | 80-100 | 100 -120 |
|---|---|---|---|---|---|---|
| Frequency | 3 | 5 | 13 | 6 | 1 | 4 |

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**76.** Calculate the mean for the following data

| Class Interval | 0-40 | 40-80 | 80-120 | 120-160 | 160-200 |
|---|---|---|---|---|---|
| Frequency | 5 | 20 | 38 | 30 | 06 |

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**77.** Find the median of the following data.

| Class Interval | 0-50 | 50-100 | 100-150 | 150-200 | 200-250 | 250-300 |
|---|---|---|---|---|---|---|
| Frequency | 10 | 22 | 30 | 32 | 12 | 02 |

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**78.** Find the mode of the following table

| Class Interval | 0-60 | 60-120 | 120-180 | 180-240 | 240-300 | 300-360 | 360-420 |
|---|---|---|---|---|---|---|---|
| Frequency | 7 | 13 | 20 | 32 | 17 | 8 | 05 |

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**79.** Find the Median when mean 10.5 and mode 17.

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**80.** Find the mode of the following

20,21,15,18,21,17,21

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**81.** Find the median of the following

30,25,26,101,100,720,1000

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**82.** Find the median of the following

6,10,5,4,1,19

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**1.** The median of the data x/5, x, x/4, x/2 and

x/8 is 8. Find the value of x.

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**2.** If the mean and median of a data are 48.5 and 46.25 respectively. Find the mode of the data.

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**3.** Find the mean when median is 72.5 and mode is 70.

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**4.** Find the median when the mean is 28.5 and mode is 27.

**5.** Find the median of the data given below:

14, 18, 9, 21, 15, 20, 16, 6

**6.** Find the median for the following data:

28, 15, 11, 19, 31, 20

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**7.** Find the mode of the scores 4, 5, 3, 2,

5,3,6,5,7,1

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**8.** Find the mode of the scores

18,21,14,18,21,16,21.

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**9.** Find the mode of the scores

28,20,24,28,36,32,28,40

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**10.** Write upper limit of 20-25

A. 22.5

B. 20

C. 25

D. 45

**Answer:**

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**11.** Write lower limit of 4-11

A. 7

B. 4

C. $7 - 5$

D. 11

**Answer:**

**12.** What is the mid value of 35-45

A. 40

B. 35

C. 45

D. 10

**Answer:**

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**13.** The most frequently used measure of central tendency

A. Median

B. Mode

C. Mean

D. None of these

**Answer:**

▶ **Watch Video Solution**

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**14.** The value of among the observation of which occurs most frequently is called

A. Median

B. Mode

C. Mean

D. None of these

**Answer:**

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15. The width of the class interval 20- 30 is

A. 10

B. 20

C. 30

D. 25

Answer:

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**16.** Which is the better measure of central tendency when individual observations are not important

A. mean

B. mode

C. median

D. None of these

**Answer:**

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17. Which measure of central tendency is given by the x coordinate of the point of intersection of the more than ogive and less than ogive.

A. mean

B. median

C. mode

D. weighteel mean

**Answer:**

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**18.** The A.M of first n natural numbers is

A. $\left(\dfrac{n}{2}\right) + 1$

B. $\dfrac{n-1}{2}$

C. $\dfrac{n+1}{2}$

D. n/2

**Answer:**

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**19.** Which of the following is not a measure of

central tendency ?

A. standard deviation

B. mode

C. median

D. mean

**Answer:**

**20.** If the mean of 4, x, 6,9,9,y and 13 is 8 then

    A. $x + y = 15$

    B. x - y = 16

C. xy = 16

D. x + y =8

**Answer:**

**21.** The mean of first 'n' odd natural numbers is

A. $\dfrac{n}{2}$

B. n

C. $n^2$

D. $\dfrac{n+1}{2}$

**Answer:**

**22.** If the mean of first n natural numbers is 11

then n =

    A. 11

    B. 12

    C. 9

D. 21

**Answer:**

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**23.** Median of first 8 prime numbers is ........

A. 7

B. 11

C. 9

D. 5

## Answer:

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**24.** If the median of the data 15,16,17,2x + 4, 3x -

2, 21,22 written in ascending order is 18 then x

A. 6

B. 5

C. 8

D. 7

**Answer:**

**25.** Empirical relation among mean, median and mode is .........

    A. Mode = 3 median - 2 mean

    B. Mode = 2 median - 3 mean

    C. Mode $= 3 median \div 2 mean$

    D. Mode $= 2 median \div 3 mean$

**Answer:**

**26.** If 35 is removed from the data, 30,34,35,36,37,38,39,40 the median is increased by

A. 0.5

B. 1

C. 1.5

D. 3

**Answer:**

**27.** The median and mean of a distribution of 29 and 32 respectively then mode

A. 25.5

B. 23

C. 18

D. 30.5

**Answer:**

**28.** The mode of the distribution 2,5,7,4,5,6,5,4,3 is

A. 4

B. 6

C. 5

D. 3

**Answer:**

**29.** The median of the observations 15, 12, 14,20,16,10 is

   A. 14

   B. 15

   C. 13.5

   D. 14.5

**Answer:**

**30.** The mid value of the class 10 - 19 is

A. 9

B. 10

C. 14.5

D. 29

**Answer:**

**31.** Mid values are used to calculate ..........

A. A.M.

B. Median

C. Mode

D. None of these

**Answer:**

**32.** The mean of x - 1, x and x + 1 is

A. x

B. x - y = 16

C. $\dfrac{3x - 1}{3}$

D. $\dfrac{3x + 1}{3}$

**Answer:**

**33.** If mean = x, median = y then mode

A. $\dfrac{x \div y}{2}$

B. $3y - 2x$

C. 2y - 3x

D. $\left(\dfrac{x}{2}\right) \div \left(\dfrac{y}{3}\right)$

**Answer:**

**34.** The median of the observations 3, 18, 6, 16, 12 and 10 is

A. 11

B. 10

C. 12

D. 13

**Answer:**

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**35.** If mean of 8,6,4,x,3,6 and 0 is 4 then the value of x =......

A. 7

B. 6

C. 1

D. 4

**Answer:**

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**36.** The extreme values of some data influences high on........

A. AM

B. Median

C. Mode

D. Range

**Answer:**

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**37.** In a data 'n' scores are given and if 'n' is odd, then median is ..........

A. $\dfrac{(n \div 1)^t h}{2}$ event

B. $n^t h$ event

C. $\dfrac{(n - 1)^t h}{2}$ event

D. $(n - 1)^t h$ event

**Answer:**

**38.** The class mark of 10-25 is............
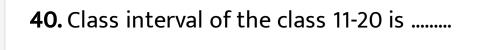
A. 10

B. 25

C. 17.5

D. 17

**Answer:**

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**39.** Mode of the data 5, 3, 4, -2, 3, 2, 2, 1, p is 3 then the value of 'p' = ........

A. 2

B. 5

C. -2

D. 3

**Answer:**

**40.** Class interval of the class 11-20 is ..........

A. 9

B. 10

C. 11

D. 20

**Answer:**

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**41.** If mean of 8,6,4,x,3,6 and 0 is 4 then the value of x =......

A. 7

B. 6

C. 1

D. 4

**Answer:**

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**42.** AM of 1, 2, x, 3 is 0 then x = ....

A. 6

B. 26

C. 24

D. 30

**Answer:**

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**43.** If the sum of 15 observations is 420 then their mean = ..........

A. 28

B. 26

C. 24

D. 30

**Answer:**

**44.** In "more than ogive curve" we consider in drawing.............

A. more than cumulative frequency, lower limits

B. more than cumulative upper limits

C. lower than cumulative frequency, lower limits

D. lower than cumulative frequency, upper limits.

**Answer:**

**45.** If $\bar{x}$, is the mean of $x_1, x_2, x_3,\ldots\ldots\ldots\ldots x_n$ (n items) then $\sum\limits_{i=1}^{n}\left(Xi_{-\overline{X}}\right)=$.............

A. 0

B. $n\overline{X}$

C. $\dfrac{X}{n}$

D. $\dfrac{2\overline{X}}{n}$

**Answer:**

▶

46. Mode can be calculated by $= l + \left( \dfrac{f_1 - f_0}{2f_1 - f_0 - f_2} \right) \times h$ here $f_1$ represents ......

A. frequency of the modal class

B. frequency of class preceding modal class

C. frequency of class succeeding in the modal class

D. cumulative frequency of the class preceding the modal class

**Answer:**

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**47.** $\dfrac{x}{4}$, x, $\dfrac{x}{5}$, $\dfrac{x}{6}$, $\dfrac{x}{4}$ If the mode of (x > 0)is 5 then x=

A. 20

B. 10

C. 15

D. 8

**Answer:**

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**48.** If 20 is removed from the data 20, 24, 25,

26,27,28,29,30 then the median is increased by

A. 1

B. 1.5

C. 0.5

D. 2

**Answer:**

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**49.** Which of the following measures of central tendency is mostly effected by the extreme?

A. Mean

B. Median

C. Mode

D. Range

**Answer:**

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**50.** The middle most value of a data is called

A. Mean

B. Mode

C. Median

D. Both B and C

**Answer:**

**51.** If the mean of 4, x, 6,9,9,y and 13 is 8 then

the relation between X and Y is

    A. X + Y =15

    B. X - Y = 15

    C. XY = 15

D. 2X - 3Y = 15

**Answer:**

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**52.** The symbol of "implies" is.......

A. $\Rightarrow$

B. $\Leftrightarrow$

C. $\forall$

D. $\exists$

**Answer:**

**53.** Range of the data 16,17,15,11,18,23,10,9,10

A. 14

B. 13

C. 7

D. 13

**Answer:**

**54.** The class marks of a class interval is ..........

A. upper boundary + lower boundary

B. upper boundary - lower boundary

C. $\dfrac{upperboundary + Lowerboundary}{2}$

D. $\dfrac{upperboundary - Lowerboundary}{2}$

**Answer:**

**55.** If mode of the following data is 7, then the value of 6, 3, 5, 6, 7, 5, 8, 7, 6, 2k + 1, 9, 7, 13 is

A. $\dfrac{5}{2}$

B. 3

C. 7

D. 5

**Answer:**

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**56.** Which of the following is not a measure of central tendency ?

A. Mean

B. Median

C. Range

D. Mode

**Answer:**

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**57.** For a symmetrical distribution, which is correct ?

A. $Mean < Mo\partial tMedian$

B. $Mean > Mode > Median$

C. Mode= $\dfrac{Mean + Median}{2}$

D. Mean = Meidan = Mode

**Answer:**

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**58.** The measure of central tendency which take into account all data terms is

A. Mode

B. Mean

C. Median

D. None of these

**Answer:**

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**59.** A data arrange in descending order has 25 observations. Which observation represents the median ?

A. $12^th$

B. $13^th$

C. $14^th$

D. $15^th$

**Answer:**

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**60.** Construction of cumulative frequency table is useful in determining the

A. Mean

B. Median

C. Mode

D. All the above

**Answer:**

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**61.** For a given data with,60 observations, 'the less than ogive' and 'the more than ogive' intersect at (66.5, 30). The median of the data is ..........

A. 30

B. 66.5

C. 60

D. 36.5

**Answer:**

**62.** For a given data with 50 observations 'the less than ogive' and the more than ogive intersect at (15.5, 20). The median of the data is ........

A. 10.5

B. 4.5

C. 20

D. 15.5

**Answer:**

**63.** The abscissa of the point of intersection of the less than type and 'more than type' cumulative frequency curves of a grouped data gives its ..........

A. Mean

B. Mode

C. Mode

D. None

**Answer:**

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**64.** For a distribution with odd number (n) of observations, the median is ............ th observation.

A. $\dfrac{n}{2}$

B. $\dfrac{n-1}{2}$

C. $\dfrac{n+1}{2}$

D. $\dfrac{n}{2} - 1$

**Answer:**

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65. For a distribution with even number (n) of observations, the median is ………. terms.

A. $\dfrac{1}{2}\left[\dfrac{n^{th}}{2} + \left(\dfrac{n}{2} + 1\right)^{th}\right]$

B. $\dfrac{1}{2}\left[\dfrac{n}{2} - \dfrac{n-1}{2}\right]$

C. $\dfrac{n}{2} + \dfrac{n+1}{2}$

D. None

**Answer:**

**66.** For a continuos grouped frequency distribution the meidan is given by

A. $l + \left[ \dfrac{\frac{n}{2} - f}{c} \right] h$

B. $l + \left[ \dfrac{\frac{n}{2} - cf}{f} \right] \times h$

C. $l^2 + \left[\dfrac{\frac{n}{2} + cf}{h}\right]$

D. None

**Answer:**

**67.** Class marks of a class $x - y$ is ............

A. $\left(\dfrac{x}{2}\right) + y$

B. $\dfrac{x}{2}$

C. xy

D. $\dfrac{x + y}{2}$

**Answer:**

---

**68.** Mean of n-observations $x_1, x_2,\ldots\ldots\ldots,x_n$

repeated $f_1, f_2, f_3\ldots\ldots\ldots f_n$ times if..........

A. $\dfrac{\sum\limits_{i=1}^{n} f_i x_i}{\sum\limits_{i=1}^{n} f_i}$

B. $\dfrac{f_i x_i}{x_i}$

C. $\dfrac{f_i}{\sum\limits_{i=1}^{n} f_i}$

D. None

**Answer:**

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**69.** Mode of a continuous grouped distribution is ..........

A. $l + \dfrac{f_1 - f_0}{(f_1 - f_0) + (f_1 - f_2)} \times h$

B. l + (f_1 - f_0)/[(f_1 - f_0)]xxh`

C. $l^2 + \dfrac{f_1 - f_0}{(f_1 - f_0 - f_2] \times h}$

D. None

**Answer:**

**70.** If assumed mean is a then mean=..........

A. $a^2 + \Sigma(f_i d_i)$

B. $a + \Sigma(f_i d_i)$

C. $a - \Sigma f_i$

D. $a + \dfrac{\Sigma f_i d_i}{\Sigma f_i}$

**Answer:**

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**71.** Mode is the value of variate which occurs

............ number of times.

A. 2

B. maximum

C. minimum

D. none

**Answer:**

**72.** If each observation of a data is increased by 'a' then mean is increases by ........

A. $a^2$

B. a

C. $\dfrac{a}{2}$

D. a + 1

**Answer:**

**73.** If the mean of $x_1, x_2, \ldots, x_n$ is $\bar{x}$ then the mean of $\dfrac{x_1}{a}, \dfrac{x_2}{a}, \ldots, \dfrac{x_n}{a}$ is ........

A. $\dfrac{\bar{x}}{a}$

B. $\left(\dfrac{x}{a}\right) - 1$

C. x-a

D. xa

Answer:

74. $\dfrac{\text{(Sum of observations)}}{\text{(Number of observations)}} = ....$

A. mode

B. median

C. scale

D. mean

**Answer:**

**75.** Mean of 1, 2, 3,...., n is .........

A. $\left(\dfrac{n}{2}\right) - 1$

B. $\dfrac{n}{2}$

C. $\dfrac{n \div 1}{2}$

D. none

**Answer:**

**76.** A.M. of 23, 24, 24, 22, 10 is ......

A. 21.6

B. 22.6

C. 12.6

D. 81.6

**Answer:**

**77.** Mode of 1, 2, 3, ... 10, 10 is .......

A. 1

B. 0

C. no mode

D. 10

**Answer:**

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**78.** Mode of 5,6,9,10,6,12,3,6,11,10,4,6,7 is...........

A. 8

B. 7

C. 6

D. 5

**Answer:**

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**79.** Mode of 20,3,7,13,3,4,6,7,19,15,7,18,2,3 is.............

A. 3,7

B. 7,10

C. 13,3

D. none

**Answer:**

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**80.** Mode of 0, 1, 2, 3, 3, 3, 7 is ........

A. 3

B. 0

C. 1

D. 9

**Answer:**

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**81.** Representing the data with the help of pictures is called ..........

A. data

B. pictograph

C. bar graph

D. none

**Answer:**

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**82.** Mid value of the class 10 - 20 is ......

A. 13

B. 12

C. 10

D. 15

**Answer:**

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**83.** Histogram consists of .......

A. rectangles

B. circles

C. triangles

D. none

**Answer:**

▶ **Watch Video Solution**

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**84.** Pie diagram consists of ........

A. circles

B. sectors

C. rectangles

D. none

**Answer:**

▶ **Watch Video Solution**

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**85.** Data having two modes is called ........ data.

A. unimodal

B. bimodal

C. trimodal

D. none

**Answer:**

▶ **Watch Video Solution**

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**86.** Mid values are used to calculate ..........

A. mean

B. mode

C. median

D. none

**Answer:**

▶ **Watch Video Solution**

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**87.** 1-8, 9-16, 17-24, ........అయిన C.I=............

A. 12

B. 10

C. 9

D. 8

**Answer:**

---

**88.** Range of 1, 2, 3, ....... 10 is ....

A. 13

B. 12

C. 8

D. 9

**Answer:**

**89.** Mean of 7, 6, 5, 0, 7, 8, 9 is .......

A. 6

B. 8

C. 9

D. none

**Answer:**

**90.** If mode of a distribution is 8 and its mean is 8 then median is .......

A. 6.1

B. 18.2

C. 9

D. 8

**Answer:**

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**91.** if the mean of 10,12,13,p and 17 is 15 then

p=........

  A. 20

  B. 10

  C. 30

  D. 12

**Answer:**

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**92.** The mean of first five prime numbers is ........

A. 8.1

B. 7.3

C. 6.5

D. 5.6

**Answer:**

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**93.** The median of the data 5, 3, 10, 7, 2, 9, 11, 2, 6 is ........

A. 6

B. 2

C. 1

D. none

**Answer:**

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**94.** Mode of first 'n' natural numbers is ........

A. n-1

B. $n^2$

C. $n \div 1$

D. no mode

**Answer:**

▶ **Watch Video Solution**

**95.** ..........is effected by extreme values.

A. mean

B. mode

C. median

D. none

**Answer:**

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**96.** Mean of - 8, - 4 and 4, 8 is ......

A. -4

B. 8

C. 0

D. 7

**Answer:**

▶ **Watch Video Solution**

**97.** Range of first 5 natural numbers is........

A. 9

B. 0

C. 5

D. 4

**Answer:**

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**98.** Empirical relation among mean, median and mode is ..........

A. Mode = 3 median - 2 mean

B. Mode = 2 median - 3 mean

C. mode = 3 median - mean

D. all the above

**Answer:**

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**99.** AM of $1^2$, $2^2$, $3^2$, $4^2$ . . . . . . . . . . $20^2$ =........

A. 40

B. 50

C. 60

D. none

**Answer:**

**100.** Which of the following is not a measure

of central tendency ?

A. mean

B. range

C. median

D. none

**Answer:**

---

**101.** A data has 13 observations arranged in descending order which observation represents the median of data?

A. $17^{t}h$

B. $6^{t}h$

C. $7^t h$

D. none

**Answer:**

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**102.** In the formula of mode in the grouped data l represents ......

A. upper boundary

B. lower boundary

C. limit

D. lower limit of the class with highest

   frequency

**Answer:**

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103. In an arranged series of an even number

2n terms the median is ..........

A. $\dfrac{1}{2}(n+1)^{th}$

B. $\frac{1}{2}\left(n^{th} \text{ and } (n+1)^{th} term\right)$

C. $\frac{1}{2}\left(n^{th}\right)$

D. none

**Answer:**

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**104.** AM of 1, 2, x, 3 is 0 then x = ....

A. -6

B. 6

C. 7

D. none

**Answer:**

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**105.** AM of first n odd numbers is ...

A. 2n

B. $n^2$

C. $\dfrac{n}{2}$

D. n

**Answer:**

**106.** Mean of 6,-4,2/3,5/4,7/6 is..........

A. $\dfrac{12}{7}$

B. $\dfrac{11}{4}$

C. $\dfrac{11}{20}$

D. none

**Answer:**

**107.** The information collected is called ..........

A. median

B. mean

C. mode

D. data

**Answer:**

**108.** In a data mean = 72.5 and median = 73.9 then mode is .........

A. 70.7

B. 69.1

C. 60.2

D. none

**Answer:**

**109.** Mode of any 3 consecutive numbers is

..........

A. x + 1

B. 4

C. 3

D. no mode

**Answer:**

**110.** ..........is based on all observations.

A. mean

B. median

C. mode

D. none

**Answer:**

**111.** The mean of first 5 odd multiples of 5 is

.........

A. 25

B. 20

C. 35

D. 15

**Answer:**

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**112.** Median = 52.5, mean = 54, use empirical relation and find mode = ........

A. 48.5

B. 60.1

C. 49.5

D. 40.5

**Answer:**

**113.** Mode = 24.5, mean = 29.75 then median [using empirical relation] = ........

A. 28

B. 16

C. 82

D. 20

**Answer:**

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**114.** ..........of all bars is same in bar graph.

A. width

B. length

C. circle

D. none

**Answer:**

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**115.** The median class of the following distribution is............

| x | 0-10 | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 | 60-70 |
|---|------|-------|-------|-------|-------|-------|-------|
| f | 4 | 4 | 8 | 10 | 12 | 8 | 4 |

A. 60-70

B. 50-60

C. 40-50

D. 30-40

Answer:

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**116.** For a given data with 120 observations, the 'less than ogive' and the 'more than ogive' intersect at (42.5,60) the median of the data is.........

A. 42.5

B. 32.7

C. 90.2

D. none

**Answer:**

**117.** Find the Median when mean 10.5 and mode 17.

**118.** Find the mode of the following 20,21,15,18,21,17,21

**119.** Find the median of the following

30,25,26,101,100,720,1000

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**120.** Find the median of the following

6,10,5,4,1,19

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**121.** Unimodal data may have ........ modes.

A. 4

B. 6

C. 2

D. 1

**Answer:**

**122.** C.I. of 1-10 is...........

A. 1

B. 10

C. 12

D. 8

**Answer:**

**123.** In calculating mode $\Delta_1$ =................

A. $f - f_1$

B. $f - f_2$

C. $f_1 - f_2$

D. none

**Answer:**

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**124.** $\sum f_x = 200, n = 20$ అయిన $\bar{x}$ =....

A. 29

B. 16

C. 10

D. 20

**Answer:**

---

**125.** AM of $a - 2, a, a + 2$ is ........

A. 3a

B. a

C. $\dfrac{a}{3}$

D. 1

**Answer:**

**126.** Mean - mode = ........

A. 3(mean - median)

B. (mean - 2 median)

C. 2 mean - median

D. none

**Answer:**

**127.** AM of 1/3, 7/12, 3/4,1/2, 5/6 is………….

A. 3

B. 12

C. 10

D. none

**Answer:**

**128.** AM of 3 and 4 is...........

A. 3.1

B. 4

C. 3.5

D. none

**Answer:**

**129.** Mean of $a + 1, a + 3, a + 4$ and $a + 8$ is

........

A. a + 7

B. a + 4

C. a - 3

D. none

**Answer:**

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**130.** If the mean of the data 2, a + 1, a - 2 is 4 then a =..........

A. 31

B. 3

C. 9

D. 10

**Answer:**

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**131.** Mean of 5, 7, 9, x is 9 then x =.......

A. 19

B. 11

C. 10

D. 15

**Answer:**

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**132.** ...........is known as father of statistics.

A. Cayley

B. Thales

C. Fisher

D. None

**Answer:**

**133.** In a data maximum value = x, minimum value = y then Range = ........

A. x - y

B. x + y

C. x - 1

D. $x \div y$

**Answer:**

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**134.** The sum of all deviations taken from AM =

.........

A. 1

B. 0

C. -1

D. 2

**Answer:**

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**135.** Mode of 2004, 2005, 2006 …….. 2014 is ………

A. 2004

B. 2014

C. 2009

D. no mode

**Answer:**

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**136.** Construction of cumulative frequency table is useful in determining the

A. Median

B. Mode

C. Mean

D. None

**Answer:**

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**137.** Cumulative frequency curves are called as ......... curves.

A. median

B. scale

C. ogive

D. none

**Answer:**

**138.** Find the median of first six prime numbers

.

**139.** The median of 2, 3,5,7,11,13

**140.** The mode of 2,2,4,5,5,7,6,1,0

**141.** The median of 1,3,5,7,11,13

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