MATHS

BOOKS - R G PUBLICATION

STATISTICS

Example

1. Find the mean of the following distribution.

x_i :	1	2	3	4	5	6	7
f_i :	5	9	12	17	14	10	6

2. If the mean of the following distribution is 4.876,what is the value of x?

Value of the variable (x_i):	3.2	5.8	7.9	4.5
Frequency (f_i) :	x	$x + 2$	$x - 3$	$x + 6$

3. The average salaries of the male and the female workers in a factory are Rs.5200 and Rs.4200 respectively.If the average salary of all of the workers is Rs.5000,then find the

percentages of the male and female workers in the factory.

4. Find the mean of the following distribution by the method of step deviation:

Class interval	0–8	8–16	16–24	24–32	32–40	40–48
Frequency	8	7	16	24	15	7

5. The literacy rates of 50 selected villages of a district were found as follows:

Literacy rate (%) :	40–50	50–60	60–70	70–80	80–90
No of villages :	7	13	16	10	4

From the above study find the literacy rate of the whole district.

6. The absence of the students of class x for a continuous period of 15 days is as

below:2,3,5,0,1,8,2,10,7,4,2,9,11,3,1   Find   the

median of the above data.

7. In 10 boxes of oranges of equal quantities

brought for sale the number of rotten

oranges are as follows:15,8,10,6,12,11,4,7,3,9 Find

the median of the above data.

8. The wages paid by an industrial farm to the unskilled workers,engaged in some petty jobs are as shown below:

Wages (in Rs.) :	10–20	20–30	30–40	40–50	50–60
No. of workers :	22	38	46	35	25

Find the median from/the above table.

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9. If the median of the following distribution is 63.71,find the value of x.

Class-interval	59–61	61–63	63–65	65–67	67–69
Frequency	4	30	45	x	6

10. The distribution of weights of 35 students is shown below:

Weight (in kg)	35–40	40–45	45–50	50–55	55–60	60–65	65–70
No. of students	3	7	9	8	5	2	1

Find the median of the above data.

11. Find the mode of the following distributions:(a)2,2,2,2,2,2,2,2,2,2

12. Find the mode of the following distributions:(b)2,5,4,3,2,8,7,2,4,5

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13. Find the mode of the following distributions:(c.)2,3,4,5,0,1,3,3,4,3

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14. Find the mode of the following frequency distribution.

Size of shoes	1	2	3	4	5	6	7	8	9	10
Shoes sold (in pairs)	3	8	15	23	35	40	32	28	20	4

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Exercise

1. What is the median of the data 15,8,10,6,12,11,4,7,3?

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2. The practical marks in Mathematics secured by 9 students are 16,13,11,x,12,10,16,15 and 14.If the mean of these marks is 14,find the value of x.

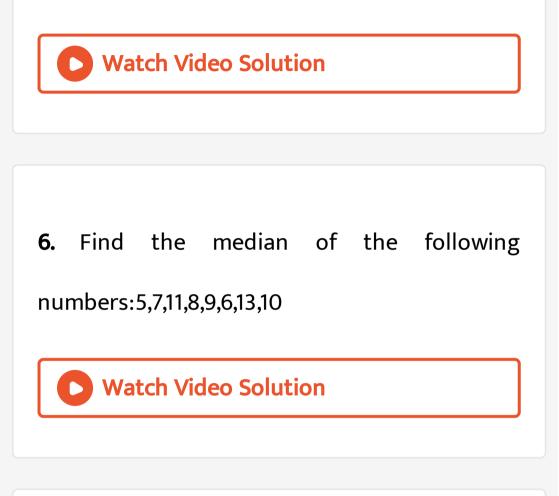**3.** The Median of the disrtibution 41,39,48,52,46,62,54 is

A. 46

B. 48

C. 52

D. 54

Answer:

4. If the mean of 6,11,x,8 and 5 is 8,what is the value of x?

5. Find the mean of first five prime numbers.

6. Find the median of the following numbers:5,7,11,8,9,6,13,10

7. What are the mean and median of the data 7,4,1,3,2,5,9,15,12

8. Find the median of the following data:7,9,4,11,4,6,8,3,4,9,4,7,2,7,2

9. Determine the mode of the following data:16,5,22,35,22,16,30,22,22,16

10. Find the mean of the following data

1,2,3,4,5,6,7,8,9 and 10

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11. Find the mode of 7,9,11,7,5,9,12,11

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12. Find the mode of the following

numbers:2,1,7,3,1,2,3,7

13. Find the mode of the following distributions:(i)2,2,2,2,2,2,2,2,2,2,2

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14. Find the mode of the following distributions:(b)2,5,4,3,2,8,7,2,4,5

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15. Find the mode of the following distributions:(iii)12,14,16,12,11,10,14,9,13

16. The mean of the following data is 20.6.Find the missing frequency:

x :	10	15	20	25	35
f :	3	10	----	7	5

17. What is the empirical relation between mean,median and mode.

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18. Which one mean,median and mode cannot be determined graphically?

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19. Out of mean,median,mode and standard deviation which is not a measure of central tendency?

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20. Write two merits of median.

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21. Write two demerits of mode.

22. The arithmetic mean of 1,2,3...n is

A. n/2

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

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

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

Answer:

23. The median of a given frequency distribution is found with the help of

a)Histogram b)Frequency curve c)Frequency Polygon d)Ogive

    A. Histogram

    B. Frequency curve

    C. Frequency Polygon

    D. Ogive

Answer:

24. The mode of a frequency distribution can be determined graphically from.

    A. Histogram

    B. Frequency Polygon

    C. Ogive

    D. Frequency curve

Answer:

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25. Mode is

    A. least frequent value

    B. Most frequent value

    C. middle most value

    D. None of these

Answer:

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26. One of the methods for determing mode is

A. Mode=2 Median-3 Mean

B. Mode=2 Mean-3 Median

C. Mode=3 Median-2mean

D. Mode=3 Mean-2 Median

Answer:

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27. For a symmetrical frequency distribution we have

    A. $Mean < \mod e < Median$

    B. $Mean > \mod e > Median$

    C. $Mean = \mod e = Median$

    D. $Mode = \dfrac{1}{2}(Mean + median)$

Answer:

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28. The median and mode of a frequency distribution are 26 and 29 then its mean is

A. 24.5

B. 25.8

C. 27.5

D. 28.4

Answer:

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29. If the mean and median of a set of numbers are 8.9 and 9 respectively then the mode will be

A. 7.2

B. 8.2

C. 8.2

D. 10.2

Answer:

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30. If the mean of first n natural numbers is

$\dfrac{5n}{2}$ then the value of n will be

A. 5

B. 4

C. 9

D. 10

Answer:

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31. If the mean of first n odd natural number is $\dfrac{n^2}{81}$ then the value of n will be

A. 81

B. 108

C. 9

D. 89

Answer:

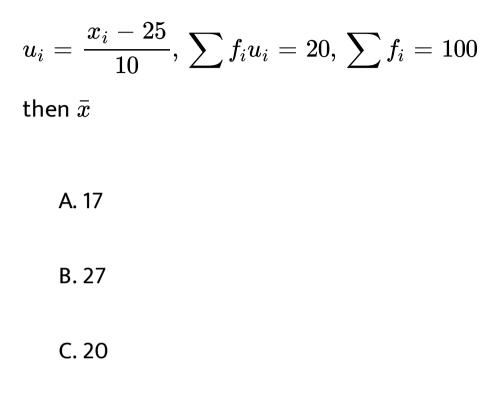▶ Watch Video Solution

32. If the mean of observations $x_1. x_2, x_3. \ldots . x_n$ is $\bar{x}$ then the mean of $x_1 + a, x_2 + a, \ldots ..x_n + a$ will be

A. $\bar{x} + a$

B. $2\bar{x} + a$

C. $\bar{a}\bar{x}$

D. $\dfrac{\bar{x} + a}{2}$

Answer:

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33. If
$$u_i = \frac{x_i - 25}{10}, \sum f_i u_i = 20, \sum f_i = 100$$
then $\bar{x}$

A. 17

B. 27

C. 20

D. 37

Answer:

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34. If the mean of 6,7,x,8,y,14 is 9 then

A. x+y=21

B. x+y=19

C. x-y=19

D. x-y=21

Answer:

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35. If the mode of the data 64,60,48,x,43,48,43

is 43 then the value of x+3 will be

A. 44

B. 45

C. 46

D. 47

Answer:

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36. For the following distribution the modal class is

Class interval	0-10	10-20	20-30	30-40	40-50	50-60
Frequency	3	9	15	30	18	5

A. $10 - 20$

B. $20 - 30$

C. $30 - 40$

D. $50 - 60$

Answer:

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37. For the following distribution the number of students who got marks less than 30 is

Marks	0-10	10-20	20-30	30-40	40-50
Frequency	3	9	13	10	5

A. 10

B. 12

C. 13

D. 25

Answer:

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38. Median=

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

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

C. $l - \left[h + \dfrac{\frac{N}{2} - cf}{f} \right]$

D. None of these

Answer:

39. Mode=

A. $M_0 = l + \dfrac{f_1 - f_0}{2f_1 - f_0 - f_2} \times h$

B. $M_0 = l + h \times \dfrac{f_1 - f_0}{2f_1 - f_0 - f_2}$

C. $M_0 = l + h \times \dfrac{f_1 - f_0}{f_1 - 2f_0 - f_2}$

D. $M_0 = l + h \times \dfrac{f_1 - f_0}{f_1 - f_0 - 2f_2}$

Answer:

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