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# India's Number 1 Education App 

## MATHS

## BOOKS - NAGEEN MATHS (HINGLISH)

## STATISTICS

## Solved Examples

1. The number of children in the families of a village are listed below :
$1,2,1,1,2,2,2,3,2,2,2,4,1,2,3,2,2,1,1,0,0,1,2,0,1,2,0,1,2,2,2,2$,
Prepare a frequency distribution table.

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2. Given below are the marks obtained by 30 students of a class, Using the class intervals of equal class size in which one class interval is $30-40$
(excluding 40), construct a frequency table.

| 42 | 74 | 39 | 48 | 42 | 80 | 35 | 38 | 52 | 81 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 31 | 72 | 65 | 58 | 77 | 82 | 79 | 65 | 47 | 30 |
| 64 | 56 | 39 | 48 | 60 | 63 | 72 | 50 | 46 | 35 |

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3. The marks of 20 students out of 25 are given below

| 12 | 17 | 22 | 7 | 11 | 19 | 24 | 18 | 4 | 8 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 23 | 2 | 5 | 15 | 21 | 16 | 11 | 9 | 12 | 17 |

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4. The table given below shows a frequency distribution table, find
(a) Upper limit of third class (b) Lower limit of fifth class
(c) Class size (d) Class mark of third class

| Class interval | Frequency |
| :---: | :---: |
| $0-10$ | 7 |
| $10-20$ | 12 |
| $20-30$ | 18 |
| $30-40$ | 22 |
| $40-50$ | 16 |
| $50-60$ | 5 |

5. The class marks of a distribution are $61,66,71,76,81,86,91,96,101,106$. Determine the class size, class limits and true class limits.

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6. The following data gives the weights of 30 persons (in kg ) $70.0,69.4,49.4,64.5,59.4,72.4,47.5,48.8,62.3,64.2,66.8,70.3,71.3,56.3$,
(i) Construct a frequency distribution such that the last class is $72-76$.
(ii) State the upper class limits of last three class intervals.
(iii) State the maximum weight that can be included in the fourth class interval.
(iv) State the class mark of each of the classes.
(v) Find the range of the given weights.
(vi) If 60 kg is the weight of a person then in which class interval, it will be taken.

## - View Text Solution

7. The approximate speeds of some objects are given below. Draw a bar graph to represent them:

| Name of objects | Bicycle | Scooter | Car | Bus | Train |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Speed (in km/hr) | 10 | 40 | 60 | 50 | 80 |

## D View Text Solution

8. Given below is the data of school going students (boys and girls):

| Mode of transport | School bus | Walking | Bicycle | Other vehicles |
| :--- | :---: | :---: | :---: | :---: |
| Number of boys | 75 | 120 | 240 | 150 |
| Number of girls | 135 | 60 | 180 | 90 |

Draw the bar graph to represent the above data.

## - View Text Solution

9. In a class of 40 students, the marks obtained (out of 50 ) are as given below:

| Marks | $0-10$ | $10-20$ | $20-30$ | $30-40$ | $40-50$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| No. of students (Frequency) | 5 | 10 | 12 | 8 | 5 |

Draw a histogram to represent the given data.

## - View Text Solution

10. Draw a histogram to represent the following:

| Class interval | $30-36$ | $36-42$ | $42-48$ | $48-54$ | $54-60$ | $60-66$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Frequency | 10 | 15 | 25 | 30 | 20 | 5 |

## - View Text Solution

11. Draw a histogram from the following data:

| Class intervals | $11-20$ | $21-30$ | $31-40$ | $41-50$ | $51-60$ | $61 \cdot 70$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Frequency | 9 | 15 | 25 | 38 | 16 | 6 |

## View Text Solution

12. Draw a frequency polygon from the following data, giving the age of doctors working in C.G.H.S. in a city.

| Age (in years) | $25-30$ | $30-35$ | $35-40$ | $40-45$ | $45-50$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| No. of doctors | 40 | 60 | 50 | 35 | 20 |

## - View Text Solution

13. The daily pocket expenses of 206 students in a school are given below.

| Pocket expenses <br> (in rupees) | $0-5^{\prime}$ | $5-10$ | $10-15$ | $15-20$ | $20-25$ | $25-30$ | $30-35$ | $35-40$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of students <br> (Frequency) | 10 | 16 | 30 | 42 | 50 | 30 | 16 | 12 |

Construct a frequency polygon representing the above data.

## - View Text Solution

14. Draw a histogram for the marks of students given below:

| Marks | $0-10$ | $10-30$ | $30-45$ | $45-50$ | $50-60$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| No. of students | 8 | 32 | 18 | 10 | 6 |

15. Find the mean of $32,35,36,31$ and 41 .
A. 35
B. 34
C. 33
D. 32

## Answer: A

## - Watch Video Solution

16. Find the mean of all prime numbers between 20 and 50 .
A. 32.86
B. 33.86
C. 34.86
D. 35.86

## Answer: D

## D Watch Video Solution

17. The mean of 10 observations is 12 . If mean of first 6 observations is 13 .

Find the mean of remaining 4 observations.
A. 11.5
B. 10.5
C. 12.5
D. 13.5

## Answer: B

## D Watch Video Solution

18. Find the arithmetic mean of:

| $x_{i}$ | 10 | 15 | 20 | 25 | 30 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $f_{i}$ | 3 | 4 | 2 | 5 | 6 |

A. 21
B. 21.4
C. 22.75
D. 21.75

## Answer: D

## - Watch Video Solution

19. The table shows the marks obtained by 25 students in a class test.

Find the mean of the marks obtained

| Marks obtained | 0 | 4 | 7 | 9 | 10 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| No. of students | 1 | 3 | 7 | 8 | 6 |

A. 7.72
B. 7.65
C. 7.4
D. 7

## D Watch Video Solution

20. Find the median of $7,6,5,3,9,4,3$.
A. 4
B. 5
C. 6
D. 7

## Answer: B

21. Find the median of the following data 3,5,9,10,11,4,5,8,12,15
A. 10
B. 9
C. 8
D. 8.5

## Answer: D

## - Watch Video Solution

22. Find the mode of $4,6,2,2,1,3,7,9,2,3,2$.
A. 1
B. 2
C. 3
D. 4

## Answer: B

23. Find the mode of the following frequency table, which gives the marks scored by 40 students in a test:

| Marks obtained | 0 | 1 | 2 | 3 | 4 | 3 | 6 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. of students | 1 | 0 | 2 | 3 | 3 | 6 | 5 |

A. 5
B. 6
C. 3
D. 4

## Answer: A

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24. In an examination, the mean of marks scored by a class of 30 students was calculated as 58.5 Later on, it was detected that the marks of one student was wrongly copied as 57 instead of 75 . Find the correct mean.
B. 58
C. 59
D. 59.1

## Answer: D

## - Watch Video Solution

25. From a set of $n(n>1)$ numbers, all except one, which is $n-\frac{1}{4}$ are $n$ 's. Find the mean of all the $n$ numbers.

## - Watch Video Solution

26. The average scored by the students of a class in English is 64. The average of marks scored by boys and the girls are respectively 68 and 58 . Then find the ratio of the number of boys to the number of girls.
27. Calculate the mean of the following distribution :

| Class interval | $0-10$ | $10-20$ | $20-30$ | $30-40$ | $40-50$ | $50-60$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Frequency | 8 | 5 | 12 | 35 | 24 | 16 |

A. 12
B. 36
C. 48
D. 24

## Answer: B

## - Watch Video Solution

28. Find the value of $p$, if mean of the following distribution is 7.5 .

| $x$ | 3 | 5 | 7 | 9 | 11 | 13 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $f$ | 6 | 8 | 15 | $p$ | 8 | 4 |

29. The mean of $1,7,5,3,4$ and 4 is $m$. The numbers $3,2,4,2,3,3$ and $p$ have mean $m-1$. Find $m$ and $p$.

## Watch Video Solution

30. The sum of deviations of a set of values $x_{1}, x_{2}, x_{3}, \ldots \ldots x_{n}$ measured from 50 is -10 and the sum of deviations of the values from 46 is 70 .

Find the value of $n$ and the mean.
A. 40.5
B. 39.5
C. 47.5
D. 49.5

## Answer: D

31. The following observations have been arranged in ascending order. If the median of the data is 63 , find the valueof x .
$29,32,48,50, \mathrm{x}, \mathrm{x}+2,72,78,84,95$

## - Watch Video Solution

32. If $x_{1}, x_{2}, \ldots \ldots \ldots, x_{n}$ are $n$ values of a variable $x$ such that $\sum\left(x_{i}-3\right)=170$ and $\sum\left(x_{i}-6\right)=50$.

Find the value of $n$ and the mean of $n$ values.
A. 8.25
B. 6.25
C. 7.25
D. 4.25

## Answer: C

1. The distance (in km ) of 40 engineers from their residence to their place of work were found as follows.

| 5 | 3 | 10 | 20 | 25 | 11 | 13 | 7 | 12 | 31 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 19 | 10 | 12 | 17 | 18 | 11 | 32 | 17 | 16 | 2 |
| 7 | 9 | 7 | 8 | 3 | 5 | 12 | 15 | 18 | 3 |
| 12 | 14 | 2 | 9 | 6 | 15 | 15 | 7 | 6 | 12 |

Construct a grouped frequency distribution table with calss- size 5 for the data given above taking the first interval as 0-5 (5 not included). What main features do you observe from this tabular representation?

## - View Text Solution

2. The heights of 50 students, measured to the nearest centimetres have been found to be as follows:

| 161 | 150 | 154 | 165 | 168 | 161 | 154 | 162 | 150 | 151 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 162 | 164 | 171 | 165 | 158 | 154 | 156 | 172 | 160 | 170 |
| 153 | 159 | 161 | 170 | 162 | 163 | 166 | 168 | 165 | 164 |
| 154 | 152 | 153 | 156 | 158 | 162 | 160 | 161 | 173 | 160 |
| 161 | 159 | 162 | 167 | 168 | 159 | 158 | 153 | 154 | 159 |

(i) Represent the data given above by a grouped frequency distribution
table, taking class intervals as 160-165, 165-170 etc.
(ii) What can you conclude about their heights from the table ?

## - View Text Solution

3. A study was conducted to find out the concentration of sulphur dioxide in the air in parts per million (ppm) of a certain city. The data obtained for

30 days is a follows :

| 0.03 | 0.08 | 0.08 | 0.09 | 0.04 | 0.17 | 0.16 | 0.05 | 0.02 | 0.06 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 0.18 | 0.20 | 0.11 | 0.08 | 0.12 | 0.13 | 0.22 | 0.07 | 0.08 | 0.01 |
| 0.10 | 0.06 | 0.09 | 0.18 | 0.11 | 0.07 | 0.05 | 0.07 | 0.01 | 0.04 |

(i) Make a grouped frequency distribution table for this data with classintervals as $0.00-0.04,0.04-0.08$ and so on.
(ii) For how many day's was the concentration of sulphar dioxide more than 0.11 parts per million ( ppm ) ?

## - Watch Video Solution

4. The value of $\pi$ upto 50 decimal places is given below
(i) Make a frequency distribution of the digits from 0 to 9 after the decimal point.
(ii) What are the most and the least frequently occuring digits?

## - Watch Video Solution

5. Given below are the seats won by different political parties in the polling outcome of a state assembly elections

| Pmoluical parit | rati...... |
| :---: | :---: |
| ${ }_{8}^{1}$ | \% |
| \% | : |
| " | \% |
| f | 3. |

(i) Draw a bar graph to represent the polling results.
(ii) Which political party won the maximum number of seats?

## - View Text Solution

6. The length of 40 leaves of a plant measured correct to one millimetre and the obtained data is represented in the following table:

| Length (in mm) | Number of leaves |
| :---: | :---: |
| $118-126$ | 3 |
| $127-135$ | 5 |
| $136-144$ | 9 |
| $145-153$ | 12 |
| $154-162$ | 5 |
| $163-171$ | 4 |
| $172-180$ | 2 |

(i) Draw a histogram to represent the given data.
(ii) Is there any other suitable graphical representation for the same data?
(iii) Is it correct to conclude that the maximum number of leaves 153 mm long and why?

## - View Text Solution

7. The following table gives the lifetimes of 400 neon lamps

| Life time (in hours) | Number of lamps |
| :---: | :---: |
| $300-400$ | 14 |
| $400-500$ | 56 |
| $500-600$ | 60 |
| $600-700$ | 86 |
| $700-800$ | 74 |
| $800-900$ | 62 |
| $900-1000$ | 48 |

(i) Represent the given information with the help of a histogram.
(ii) How many lamps have a lifetime of more 700 h ?
8. The following table gives the distribution of students of two sections according to the marks obtained by them

| Section $A$ |  | Section $B$ |  |
| :---: | :---: | :---: | :---: |
| Marks | Frequency | Marks | Frequency |
| $0-10$ | 3 | $0-10$ | 5 |
| $10-20$ | 9 | $10-20$ | 19 |
| $20-30$ | 17 | $20-30$ | 15 |
| $30-40$ | 12 | $30-40$ | 10 |
| $40-50$ | 9 | $40-50$ | 1 |

Represent the marks of the students of both the sections on the same graph by two frquency polygons. From the two polygons compare the performance of the two sections.

## - View Text Solution

9. The runs scored by two teams $A$ and $B$ on the first 60 balls in a cricket match are given below:

| Number of balls | Team $\boldsymbol{A}$ | Team $\boldsymbol{B}$ |
| :---: | :---: | :---: |
| $1-6$ | 2 | 5 |
| 7.12 | 1 | 6 |
| $13-18$ | 8 | 2 |
| $19-24$ | 9 | 10 |
| $25-30$ | 4 | 5 |
| 31.36 | 5 | 6 |
| $37-42$ | 6 | 3 |
| $43-48$ | 10 | 4 |
| $49-54$ | 6 | 8 |
| $55-60$ | 2 | 10 |

Represent the data of both the teams on the same graph by frequency polygons.

## - View Text Solution

10. A random survey of the number of children of various are groups playing in park was found as follows:

| Age (in years) | Number of children |
| :---: | :---: |
| $1-2$ | 5 |
| $2-3$ | 3 |
| $3-5$ | 6 |
| $5-7$ | 12 |
| $7-10$ | 9 |
| $10-15$ | 10 |
| $15-17$ | 4 |

Draw a histogram to represent the data above.

## D View Text Solution

11. 100 surnames were randomly picked up from a local telephone directory and a frequency distribution of the number of letter in English alphabet in the surnames was found as follows:

| Number of letters | Number of surnames |
| :---: | :---: |
| $1-4$ | 6 |
| $4-6$ | 30 |
| $6-8$ | 44 |
| $8-12$ | 16 |
| $12-20$ | 4 |

(i) Draw a histogram to depict the given information.
(ii) Write the class interval in which the maximum number of surnames lie.

## - View Text Solution

12. The mean of five numbers is 30 . If one number is excluded, their mean becomes 28 . The excluded number is
A. 28
B. 30
C. 35
D. 38

## Answer: D

## - Watch Video Solution

13. If the mean of the observation $x, x+3, x+5, x+7$ and $x+10$ is 9 , then mean of the last three observations is
A. $10 \frac{1}{3}$
B. $10 \frac{2}{3}$
C. $11 \frac{1}{3}$
D. $11 \frac{2}{3}$

## Answer: C

14. The mean deviation for $n$ observations $x_{1}, x_{2},, x_{n}$ from their mean $X$ is given by
A. $\sum_{i=1}^{n}\left(x_{i}-X\right)$
B. $\frac{1}{n} \sum_{i=1}^{n}\left(x_{i}-X\right)$
c. $\sum_{i=1}^{n}\left(x_{i}-X\right)^{2}$
D. $\frac{1}{n} \sum_{i=1}^{n}\left(x_{i}-X\right)^{2}$

## Answer: B

## - Watch Video Solution

15. If each observation of the data is increased by 5 , then their mean
A. remains the same
B. becomes 5 times the original mean
C. is decreased by 5
D. is increased by 5

## D Watch Video Solution

16. Let $\bar{x}$ be the mean of $x_{1}, x_{2}, \ldots \ldots \ldots, x_{n}$ and $\bar{y}$ be the mean of $y_{1}, y_{2}, \ldots \ldots \ldots, y_{n}$. If $\bar{z}$ is the mean of $x_{1}, x_{2}, \ldots \ldots \ldots \ldots \ldots . x_{n}, y_{1}, y_{2}, \ldots \ldots \ldots \ldots, y_{n}$, then $\bar{z}$ is equal to
A. $\bar{x}+\bar{y}$
B. $\frac{\bar{x}+\bar{y}}{2}$
C. $\frac{\bar{x}+\bar{y}}{n}$
D. $\frac{\bar{x}+\bar{y}}{2 n}$

## Answer: B

17. If $\bar{x}$ is the mean of $x_{1}, x_{2}, \ldots \ldots \ldots \ldots, x_{n}$, then for $a \neq 0$, the mean of $a x_{1}, a x_{2}, \ldots \ldots ., a x_{n}, \frac{x_{1}}{a}, \frac{x_{2}}{a}, \ldots \ldots \ldots . ., \frac{x_{n}}{a}$ is
A. $\left(a+\frac{1}{a}\right) \bar{x}$
B. $\left(a+\frac{1}{a}\right) \frac{\bar{x}}{2}$
C. $\left(a+\frac{1}{a}\right) \frac{\bar{x}}{n}$
D. $\frac{\left(a+\frac{1}{a}\right) \bar{x}}{2 n}$

## Answer: B

## - Watch Video Solution

18. If $\bar{x}_{1}, \bar{x}_{2}, \bar{x}_{3}, \ldots \bar{x}_{n}$ are the means of n groups with $n_{1}, n_{2}, n_{3}, \ldots n_{n}$ numbers of observations respectively. Than the mean $\bar{x}$ of all group together is given by :
A. $\sum_{i=1}^{n} n_{i} \bar{x}_{i}$
B. $\frac{\sum_{i=1}^{n} n_{i} \bar{x}_{i}}{n^{2}}$
C. $\frac{\sum_{i=1}^{n} n_{i} \bar{x}_{i}}{\sum_{i=1}^{n} n_{i}}$
D. $\frac{\sum_{i=1}^{n} n_{i} \bar{x}_{i}}{2 n}$

## Answer: C

## - Watch Video Solution

19. The mean of 100 observation is 50 . If one of the observation which was

50 is replaced by 150 , the resulting mean will be
A. 50.5
B. 51
C. 51.5
D. 52

## Answer: B

20. There are 50 numbers. Each number is subtracted from 53 and the mean of the number so obtained is found to be $=3.5$. The mean of the given number is
A. 46.5
B. 49.5
C. 53.5
D. 56.5

## Answer: D

## - Watch Video Solution

21. The mean of 25 observation is 36 . Out of these observations, if the mean of first 13 observations is 32 and that of the last 13 observations is 40 , the 13th observation is

$$
\text { A. } 23
$$

B. 36
C. 38
D. 40

## Answer:

## - Watch Video Solution

22. The marks obtained (out of 100) by a class of 80 students are given below:
$\left.\begin{array}{|c|c|}\hline \text { Marks } & \text { Number of students } \\ \hline 10-20 & 6 \\ 20.30 & \ddots\end{array}\right] 17$

Construct a histogram to represent the data above

## Exercise 14 A

1. Statistical Data : Primary Data and Secondary Data.

## - Watch Video Solution

2. Explain the meaning of the following:
(i) Class-interval(ii) Class size (iii) Frequency (iv) Class limits (v) True class limits

## - Watch Video Solution

3. Arrange the following data as on array (in ascending order)
6.3, 5.9, 9.8, 12.3, 5.6,4.7.

## - Watch Video Solution

4. Following are the marks obtained by 30 students in a examination

| 15 | 20 | 8 | 9 | 10 | 16 | 17 | 20 | 24 | 30 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 44 | 47 | 38 | 36 | 40 | 27 | 25 | 28 | 30 | 19 |
| 7 | 11 | 21 | 31 | 41 | 37 | 47 | 23 | 20 | 17 |

Taking class intervals $0-10,10-20, \ldots .40-50$ construct a frequency table.

## - Watch Video Solution

5. The marks obtained by 32 students of a class are given below. Prepare a frequency table with class intervals $31-40,41-50, \ldots$. . etc.

| 35 | 44 | 55 | 68 | 70 | 41 | 38 | 53 | 72 | 69 | 61 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 49 | 64 | 50 | 32 | 48 | 57 | 63 | 70 | 78 | 63 | 46 |
| 41 | 52 | 39 | 43 | 60 | 70 | 48 | 72 | 37 | 40 |  |

## - Watch Video Solution

6. From the following frequency table.

| Class interval | $0-5$ | $5-10$ | $10-15$ | $15-20$ | $20-25$ | $25-30$ | $30-35$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Frequency | 6 | 10 | 18 | 29 | 35 | 38 | 40 |

Find : (a) The frequency of fifth class interval
(b) The upper class limit of third class interval.
(c) The lower class limit of second class interval.
(d) The class mark of sixth class interval.
7. The class marks of a distribution are $12,18,24,30$. Find the class interval.

## - Watch Video Solution

8. Use the given table to find.

| Class interval | $30-34$ | $35-39$ | $40-44$ | $45-49$ | $50-54$ | $55-59$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Frequency | 7 | 10 | 12 | 13 | 8 | 4 |

(a) The actual class limits of the fourth class.
(b) The class boundries of the sixth class.
(c) The class mark of the third class.
(d) The upper and lower limits of the third class.
(e) The size of the third class

## - Watch Video Solution

9. Construct a frequency table for the following ages (in years) of 30 students using equal class intervals, one of them being $9-12$, where 12 is not included.
$18,12,7,6,11,15,21,9,8,13,15,17,22,19,14,21,23,8,12,17,15,6,18,2$

## - Watch Video Solution

10. The following are weights (in kg ) of 50 children taken at the time of birth:

| 2.0 | 2.5 | 2.8 | 2.3 | 3.0 | 3.1 | 2.4 | 2.5 | 4.2 | 3.5 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 3.7 | 2.8 | 2.3 | 2.9 | 3.5 | 3.1 | 4.1 | 2.5 | 3.1 | 3.6 |
| 2.9 | 2.7 | 3.0 | 3.9 | 2.9 | 3.1 | 3.7 | 3.8 | 3.2 | 3.3 |
| 4.1 | 4.2 | 3.7 | 4.5 | 4.2 | 3.0 | 2.5 | 3.9 | 2.8 | 3.5 |
| 3.8 | 3.1 | 4.3 | 2.8 | 4.1 | 3.1 | 2.8 | 4.1 | 2.8 | 4.1 |

Make an inclusive form grouped frequency distribution table with 0.3 kg as the width of ' each class.

Also, find the true class limits of each class.

1. Find the mean of the following data.
(i) $3,5,3,4,2,0,7$ and 10 (ii) 6.2, 5.6, 4.8, 11.2, 12.5, 7.4 and 6.3 (iii) $16,39,43$, 120, 475, 248, 368

## - Watch Video Solution

2. Find the arithmetic mean of first 6 natural numbers.

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3. Find the mean of all factors of 10 .

## - Watch Video Solution

4. Find the mean of integers from -4 to 5
A. 5
B. 0.5
C. 1.5
D. none of these

## Answer: B

## - Watch Video Solution

5. The mean of $3, a+2,8,12,2 a-1$ and 6 is 7 , find the value of $a$.

## D Watch Video Solution

6. The mean of $16,19, P, 21,25,28$ is 22 , find the value of $P$.
A. 23
B. 24
C. 25
D. 26

## Answer: A

## - Watch Video Solution

7. The mean of 20 observations is 30 . If the mean of first 15 observations is 32 , find the mean of last 5 observations.
A. 22
B. 24
C. 26
D. 30

## Answer: B

## - Watch Video Solution

8. The mean of 25 observations is 72 . It was detected that one observation 53 was wrongly copied as 78 . Find the correct mean.
A. 72
B. 71
C. 78
D. 76

## Answer: B

## - Watch Video Solution

9. The mean monthly salary of 8 teachers is ₹ 32,000 . When the salary of one senior teacher is included their mean becomes ₹ 33,500 . Find the salary of the senior teacher.
A. 42500
B. 45000
C. 42000
D. 45500

## Answer: D

## - Watch Video Solution

10. Find the mean of the frequency distribution:
(i)

| Observations $(x)$ | 2 | 4 | 7 | 8 |
| :---: | :---: | :---: | :---: | :---: |
| Frequency $(f)$ | 6 | 9 | 12 | 15 |

(ii) The weight of 40 students of class IX are given below:

| Weight (kg) | 38 | 40 | 41 | 43 | 45 | 48 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. of students | 3 | 8 | 9 | 7 | 6 | 7 |

## - Watch Video Solution

11. Find the median of
(i) $7,11,25,45,23,12,11,9,10$
(ii) $15,14,11,9,7,12,18,20$
(iii) $8,7,9,12,8,17,15,10$
(iv) $14,18,12,9,3,5,11,11,19,2$

## - Watch Video Solution

12. Find the median of first 7 prime numbers.
A. 6
B. 7
C. 8
D. 9

## Answer: B

## - Watch Video Solution

13. Find the median of first 10 even natural numbers.
A. 10
B. 11
C. 12
D. 13

## Answer: B

## - Watch Video Solution

14. The following data has been arranged in ascending order. If their median is 63 , find the value of $x$.
$34,37,53, x, x+2,77,83,89$ and 100
A. 55
B. 61
C. 62
D. 59

## Answer: C

15. Find the mode of
(i) $7,7,8,10,10,11,10,13,14$
(ii) $4,5,6,7,8,7,6,5,3,4,6,7,6$

## - Watch Video Solution

16. Find the mode of following data:

| $\boldsymbol{x}$ | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\boldsymbol{f}$ | 6 | 7 | 9 | 13 | 10 | 12 | 8 | 0 | 4 |

## - Watch Video Solution

17. Find the mode of following data:

| $\boldsymbol{x}$ | 3 | 5 | 9 | 11 |
| :---: | :---: | :---: | :---: | :---: |
| $f$ | 16 | 12 | 24 | 10 |

18. Find the mean, median and mode of the following data:
(i) 7, 19, 19, 7, 25, 7
(ii) 21, 24, 21, 6, 15, 18, 21, 45, 9, 6, 27 and 15

## - Watch Video Solution

19. Find the sum of deviations of the following data measured from their actual mean.
10.3, 12.5, 13.7, 9.4, 8.6, 11.2, 12.1, 10.9, 13.2, 15.4, 14.7, 9.1, 14.2, 15.8, 7.8.

## - View Text Solution

20. The weights of 9 boxes in kgms are as follows:
27.5, 31.2, 28.0, 32.0, 29.8, 30.3, 92.0, 28.7, 31.5

Find the appropriate average weight of the boxes.

## - Watch Video Solution

1. If the heights of 5 persons are $140 \mathrm{~cm}, 150 \mathrm{~cm}, 152 \mathrm{~cm}$ and 161 cm respectively. Find the mean height.

## - Watch Video Solution

2. Find the mean of $x, x+2, x+4, x+6, x+8$
A. $x$
B. $x+2$
C. $x+6$
D. $x+4$

## Answer: D

3. Find the mean of the following distribution:

| $x$ | 4 | 6 | 9 | 10 | 15 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $f$ | 5 | 10 | 10 | 7 | 8 |

A. 9
B. 10
C. 11
D. 12

## Answer: A

## - Watch Video Solution

4. Find the value of $P$ if the mean of the following distribution is 7.5

| $\boldsymbol{x}$ | 3 | 5 | 7 | 9 | 11 | 13 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $y$ | 6 | 8 | 15 | $P$ | 8 | 4 |

A. 1
B. 2
C. 3
D. 4

## Answer: C

## - Watch Video Solution

5. The mean weight of 60 students of a class is 52.75 kg . If the mean weight of 25 of them is 51 kg ., find the mean weight of remaining students.
A. 58 kg
B. 56 kg
C. 54 kg
D. 51 kg

## Answer: C

6. The runs scored by 11 numbers of a cricket team are $14,30,43,42,12,50$, $32,20,0,58,37,36$. Find the median score.
A. 32
B. 50
C. 42
D. 37

## Answer: A

## - Watch Video Solution

7. Find the median of the following distribution:
$40,49,17,68,44,62,48,47,21,55,32,50,12,27,30,18$
A. 42
B. 40
C. 47
D. 46

## Answer: A

## - Watch Video Solution

8. The median of the observations $11,12,14,18,(x+4), 30,32,35,41$ arranged in ascending order is 24 . Find the value of $x$.
A. 15
B. 20
C. 25
D. 30

## Answer: B

9. Find the mode of the following distribution $7,9,8,11,8,12,8,9$.
A. 8
B. 9
C. 10
D. 11

## Answer: A

## Watch Video Solution

10. The marks of 20 students in a test were as follows: $5,6,8,9,10,11,12$, $13,13,14,14,15,15,15,16,16,18,19,20$. Calculate the mean, median and mode.
