MATHS

BOOKS - RD SHARMA MATHS (ENGLISH)

DATA HANDLING-I (CLASSIFICATION AND TABULATION DATA)

Others

1. Given below are the ages of 25 students of class VIII in a school. Prepare a discrete frequency distribution.

15, 16, 16, 14, 17, 17, 16, 15, 15, 16, 16, 17, 15, 16, 16, 14, 16, 15, 14, 15, 16, 16

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2. From a discrete frequency distribution from the following scores:

15, 18, 16, 20, 25, 24, 25, 20, 16, 15, 18, 18, 16, 24, 15, 20, 28, 30, 27, 16, 24, 25

3. Define the following terms: (i) Observations (ii) Raw data (iii) Frequency of an observation (iv) Frequency distribution (v) Discrete frequency distribution (vi) Grouped frequency distribution (vii) class-interval (viii) Class-size (ix) Class limits (x) True class limits

4. The final marks in mathematics of 30 students are as follows:

53, 61, 48, 60, 78, 68, 55, 100, 67, 90, 75, 88, 77, 37, 84, 58, 60, 48, 62, 56, 44, 5

Arrange these marks in the ascending order, 30 to 39 one group, 40 to 49 second group etc. Now answer the following: What is the highest score? What is the lowest score? What is the range? If 40 is the pass marks how

many have failed? How many have scored 75 or more? Which observations between 50 and 60 have not actually appeared? How many have scored less than 50?

5. The weights of new born babies (in kg) in a hospital on a particular day are as follows: 2.3, 2.2, 2.1, 2.7, 2.6, 3.0, 2.5, 2.9, 2.8, 3.1, 2.5, 2.8, 2.7, 2.9, 2.4 Rearrange the weights in descending order. Determine the highest weight. Determine the lowest weight. Determine the range. How many babies were born on that day? How many babies weight below 2.5 kg.? How many babies weigh more than 2.8 kg? How many babies weight 2.8 kg?

6. Following data gives the number of children in 40 families:

1,2,6,5,1,5,1,3,2,6,2,3,4,2,0,0,4,4,3,2,2,0,0,1,2,2,4,3,2,1,0,5,   1,2,4,3,4,1,6,2,2

Represent it in the form of a frequency distribution.

7. Prepare a frequency table of the following scores obtained by 50 students in a test: 42,51,21,42,37,37,42,49,38,52,7,33,17 44,39,7,14,27,39,42,42,62,37,39,67,51, 53,53,59,41,29,38,27,31,54,19,53,51,22 61,42,39,59,47,33,34,16,37,57,43

8. A die was thrown 25 times and following scores were obtained: 1,5,2,4,3,6,1,4,2,5,1,6,2 6,3,5,4,1,3,2,3,6,1,5,2 Prepare a frequency table of the scores.

9. In a study of number of accidents per day, the observations for 30 days were obtained as follows: 6,3,5,6,4,3,2,5,4,2,4,2,1,2,2 0,5,4,6,1,6,0,5,3,6,1,5,5,2,6 Prepare a frequency distribution table.

10. Prepare a frequency table of the following ages (in years) of 30 students of class VIII in your school:

13,14,13,12,14,13,14,15,13,14,13,14,16,12,14,13,14,15,16, 13,14,13,12,17,13,12,13,13,13,14,

11. Following figures relate to the weekly wages (in Rs.) of 15 workers in a factory: 300,250,200,250,200,150,350,200,250,200,150,300,150,200,250 Prepare a frequency table. What is the range in wages (in Rs)? How many workers are getting Rs. 350? How many workers are getting the minimum wages?

12. Construct a frequency distribution table for the following marks obtained by 25 students in a history test in class VII of a school:

9,17,12,20,9,18,25,17,19,9,12,9,12,18,17,19,20,25,9,12,17, 19,19,20,9 What is the range of marks? What is the highest mark? Which mark is occurring more frequently?

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13. The water tax bills (in rupees) of 30 houses in a locality are given below. Construct a grouped frequency distribution with class size of 10.

30,32,45,54,74,78,108,112,66,76,88,40,14,20,15,35,44,66,

75,84,95,96,102,110,88,74,112,14,34,44

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14. Form a grouped frequency distribution from the following data by inclusive method taking 4as the magnitude of class intervals.

31,23,19,29,22,20,16,10,13,34,38,33,28,21,15,18,36,24,18,15,

12,30,27,23,20,17,14,32,16,25,18,29,24,19,16,11,22,15,17,10

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15. The maximum temperatures (in degrees celcius) and relative humidity (in percent) for Delhi for the month of August 1998, as reported by Meteorological department, are given below. Construct a frequency table for each. Maximum temperatures (in degree celcius) 32.5, 30.5, 33.8, 31.0, 28.6, 33.9, 31.4, 34.4, 35.6, 37.3, 37.5, 36.7, 37.0, 36.3 ,36.9, 36.7 Relative humidity (in percent) 90,97,92,95,93,95,93,85,83,85,83,77,83,77,74,60,71,65,74, 80,87,82,81,76,61,63,58,58,56,57,54

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16. The marks obtained by 40 students of class VIII in an examination are given below: 18,8,12,0,8,16,12,5,23,2,16,23,2,10,20,12,9,7,6,5,3,5, 13,21,13,15,20,24,1,7,21,16,13,18,23,7,3,18,17,16 Present the data in the form of a frequency distribution using the same class size, one such class being 15-20 (where 20 is not included).

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17. The weights in grams of 50 oranges picked at random from a consignment are as follows: 131,113,82,75,204,81,84,118,104,110,80,107,111,141, 136,123,90,78,90,115,110,98,106,99,107,84,76,186,82, 100,109,128,115,107,115,119,93,187,139,129,130,68,   195,123,125,111,92,86,70,126 Form the grouped frequency table by dividing the variable range into intervals of equal width, each corresponding to 20gms in such a way that the mid-value of the first class corresponds to 70 gms.

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18. The marks obtained by 40 students of class VIII in an examination are given   below: 16,17,18,3,7,23,18,13,10,21,7,1,13,21,13,15,19,24,16,3, 23,5,12,18,8,12,6,8,16,5,3,5,0,7,9,12,20,10,2,23 Divide the data into five groups, namely 0-5, 5-10, 10-15, 15-20 and 20-25 and prepare a grouped frequency table.

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19. The marks scored by 20 students in a test are given below: 54,42,68,56,62,71,78,51,72,53,44,58,47,64,41,57,89,53,87,57. Complete the following frequency table: Marks in class intervals, Tally marks, Frequency (No. of children 40-50 50-60 60-70 70-80 80-90, , What is the class interval in which the greatest frequency occurs?

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20. The following is the distribution of weights (in kg) of 52 persons: Weight in kg, Persons 30-40 40-50 50-60 60-70 70-80, 10 15 17 6 4 What is the lower limit of class 50-60? Find the class marks of the classes 40-50, 50-60 What is the class size?

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21. Construct a frequency table for the following weights (in gm) of 35 mangoes using the equal class intervals, one of them is $40 - 45$ (45 not included):

30, 40, 45, 32, 43, 50, 55, 62, 70, 70, 61, 62, 53, 52, 50, 42, 35, 37, 53, 55, 65, 70

What is the class marks of the class interval $40 - 45$?

What is the range of the above weights? How many classes are there?

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22. Construct a frequency table with class-intervals 0-5 (5 not included) of the following marks obtained by a group of 30 students in an examination: 0,5,7,10,12,15,20,22,25,27,8,11,17,3,6,9,17,19,21, 29,31,35,37,40,42,45,49,4,50,16.

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23. The marks scored by 40 students of class VIII in mathematics are given below: 81,55,68,79,85,43,29,68,54,73,47,35,72,64,95,44,50,77,64, 35,79,52,45,54,70,83,62,64,72,92,84,76,63,43,54,38,73,68,52,54. Prepare a frequency distribution with class size of 10 marks.

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24. The heights (in cm) of 30 students of class $VIII$ are given below:

155, 158, 154, 158, 160, 148, 149, 150, 153, 159, 161, 148, 157, 153, 157, 162, 1

Prepare a frequency distribution table with $160 - 164$ as one of the class intervals.

25. The monthly wages of 30 workers in a factory are given below:

830,835,890,810,835,836,869,845,898,890,820,860,832,833,

855,845,804,808,812,840,885,835,836,878,840,868,890,   806,840,890

Represent the data in the form of a frequency distribution with class size 10.

26. Construct a frequency table with equal class intervals from the following data on the monthly wages (in rupees) of 28 labourers working

in a factory, talking one of the class intervals as $210 - 230$ (230 not included):

$220, 268, 258, 242, 210, 268, 272, 242, 311, 290, 300, 320, 319, 304, 302, 318, 3$

27. the daily minimum temperatures in degrees Celsius recorded in a certain   Arctic   region   are   as   follows:

$- 12. 5, \ - 10. 8, \ - 18. 6, \ - 8. 4, \ - 10. 8, \ - 4. 2, \ - 4. 8, \ - 6. 7, \ - 13. 2,$

$- 11. 8, \ - 2. 3, 1.2, 2.6, 0, \ - 2. 4, 0, 3.2, 2.7, 3.4, 0, \ - 2. 4, \ - 2. 4, 0,$

$3. 2, 2.7, 3.4, 0, \ - 2. 4, \ - 5. 8, \ - 8. 9, \ - 14, 6, \ - 12. 3, \ - 11. 5, \ - 7. 8,$

Represent them as frequency distribution table taking $- 19. 9 \rightarrow - 15$ as the first class interval.