

# NCERT SOLUTIONS CLASS-8 MATHS

## CHAPTER-5 EXERCISE-5.1

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1. For which of these would you use a histogram to show the data:

- (a) The number of letters for different areas in a postman's bag.
- (b) The height of competitors in an athletics meet.
- (c) The number cassettes produced by 5 companies.
- (d) The number of passengers boarding trains from 7.00 a.m. to 7.00 p.m. at a station.

Give a reason for each of the following.

Answer:

Since histogram is graphical representation of data, if data is represented in the form of class interval.

Therefore, for case (b) and (d), we would use a histogram to show the data, because in these cases, data can be divided into class-intervals. In case (b), a group of competitions having different heights in athletics meets. In case (d), the number of passengers boarding trains in an interval of one hour at a station.

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2. Shoppers who come to a grocery store are identified as: Boy (B), Man (M), Girl (G) or Women (W). The list given below gives the shoppers who had come in the morning time slot:

W W W G B W W M G G M M W W W W G B M W B G G M W W M M W W W M W B W G M W W W W G W M M W M  
W G W M G W M M B G G W

Construct a frequency distribution table using the tally marks. Sketch a bar graph to represent it.

Answer:

1.2.1

The representation of the above data by bar graph is as follows:

1.2.2

3. The weekly salary (in Rs) of 30 workers in are:

830, 835, 890, 810, 835, 836, 869, 845, 898, 890, 820, 860, 832, 833, 855, 845, 804, 808, 812, 840, 885, 835, 835, 836, 878, 840, 868, 890, 806, 840.

By referring the tally marks, make a frequency table with following intervals as 800 – 810, 810 – 820 and so on.

Answer:

The illustration of data by frequency distribution table by using the tally marks is as follows:

1.3

4. Construct a histogram for frequency table made for the data that is given in question 3 and solve the following

questions.

(i) Which group has highest workers?

(ii) Tell the number of workers who earn Rs. 850/- and more?

(iii) Identify the number of workers who earn less than Rs. 850/-

**Answer:**

Histogram of the above frequency distribution table is as follows:

1.4

(i) Highest number of workers are present in 830 – 840 group.

(ii) The workers who earn more than Rs. 850, these workers fall in the category of 880 – 890 or 850 – 860 or 860 – 870. Therefore, the number of workers who are earning more than 850 will be the sum of the numbers of these workers i.e.,  $1 + 3 + 1 + 1 + 4 = 10$

(iii) The workers are being paid less than Rs.850 are the number of workers who come under the category 840 – 850 or 800 – 810 or 820 – 830 or 810 – 820 .Therefore, the number of workers who paid less than 850 will be the sum of the numbers of all these categories i.e.,

$$3 + 2 + 1 + 9 + 5 = 20$$

**5. The students of particular class watched their lecture on television for different number of hours during the holidays; the results represented through graph.**

**Calculate the following:**

(i) What is the number of hours did the maximum number of students watch TV?

(ii) What is the number of students who watched TV for less than 4 hours?

(iii) What is the total number of students who spent more than 5 hours in watching TV?

1.5

**Answer:**

(i) It can be observed from the graph, that the maximum number of students (i.e., 32) watched TV for 4 – 5 hours.

(ii) The number of students who watched TV for less than 4hours are the students who watched TV for 3 – 4 hours or 2 – 3 hours or 1 – 2 hours.

Therefore, the total number of students =  $4 + 8 + 22 = 34$

(iii) The number of students who watched TV for more than 5 hours falls in the following category 5 – 6 hours or 6 – 7 hours.

Therefore, Sum of the above category of students =  $8 + 6 = 14$