Chapter 3: Data Handling, Class 9

## CLASS NOTES-ANSWERS

## EXERCISE 3.3

1. Use the bar graph (Fig 3.3) to answer the following questions.
(a) Which is the most popular pet?
(b) How many students have dog as a pet?


Fig 3.3


Fig 3.4

Answer: (a) Cats are the most popular pet among the students.
(b) 8 students have dog as a pet animals
2. Read the bar graph (Fig 3.4) which shows the number of books sold by a bookstore during five consecutive years and answer the following questions:
(i) About how many books were sold in 1989? 1990? 1992?
(ii) In which year were about 475 books sold? About 225 books sold?
(iii) In which years were fewer than 250 books sold?
(iv) Can you explain how you would estimate the number of books sold in 1989?

Answer:

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(i) In 1989, 180 books were sold.In 1990, 475 books were sold.In 1992, 225 books were sold.
(ii) In 1990 about 475 books were sold land in 1992, 225 books were sold.
(iii) In 1989 and 1992 fewer than 250 books were sold.
(iv) From the graph, we can conclude that 180 books were sold in 1989
3. Number of children in six different classes are given below. Represent the data on a bar graph.

| Class | Fifth | Sixth | Seventh | Eighth | Ninth | Tenth |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of Children | 135 | 120 | 95 | 100 | 90 | 80 |

(a) How would you choose a scale?
(b) Answer the following questions:
(i) Which class has the maximum number of children? And the minimum?
(ii) Find the ratio of students of class sixth to the students of class eight. Answer:
a) Scale on $y$-axis is 1 unit $=20$ children

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(i) Fifth class has maximum number of children i.e. 135

Tenth class has the minimum number of children i.e. 80
(ii) Number of students in class sixth is 120

Number of students in class eighth is 100

$$
\begin{aligned}
\text { Ratio } & =\frac{\text { Number of students in class sixth }}{\text { Number of students in class eighth }} \\
& =\frac{120}{100} \\
& =\frac{6}{5}
\end{aligned}
$$

Ratio $=6: 5$
4. The performance of a student in $1^{\text {st }}$ Term and $2^{\text {nd }}$ Term is given. Draw a double bar graph choosing appropriate scale and answer the following:

| Subject | English | Hindi | Maths | Science | S. Science |
| :--- | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}^{\text {st }}$ Term (M.M. 100) | 67 | 72 | 88 | 81 | 73 |
| $\mathbf{2}^{\text {nd }}$ Term (M.M. 100) | 70 | 65 | 95 | 85 | 75 |

(i) In which subject, has the child improved his performance the most?
(ii) In which subject is the improvement the least?
(iii) Has the performance gone down in any subject?

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Answer:


## Subject

Difference between the marks of 1st and 2nd term
English = 70-67=3
Hindi $=65-72=-7$ (Decrease in marks)
Math $=95-88=7$
Science $=85-81=4$
Social Science $=75-73=2$
(i) In Math, the performance of the students improved the most.
(ii) In Social science, the performance of the students improved the least.
(iii) Yes, in Hindi the performance of the students has gone down.
5. Consider this data collected from a survey of a colony:

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| Favourite Sport | Cricket | Basket Ball | Swimming | Hockey | Athletics |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Watching | 1240 | 470 | 510 | 430 | 250 |
| Participating | 620 | 320 | 320 | 250 | 105 |

(i) Draw a double bar graph choosing an appropriate scale. What do you infer from the bar graph?
(ii) Which sport is most popular?
(iii) Which is more preferred, watching or participating in sports?

Answer:

(i) This bar graph shows the number of persons who are watching and participating intheir favorite sports.
(ii) Cricket is the most popular sport.
(iii) Watching different sports is more preferred than participating in the sports.
6. Take the data giving the minimum and the maximum temperature of various cities given in the beginning of this Chapter (Table 3.1).

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Table 3.1

| Temperatures of Cities <br> as on <br> 20.6.2006 |  |  |
| :--- | :---: | :--- |
| City | Max. | Min. |
| Ahmedabad | $38^{\circ} \mathrm{C}$ | $29^{\circ} \mathrm{C}$ |
| Amritsar | $37^{\circ} \mathrm{C}$ | $26^{\circ} \mathrm{C}$ |
| Bangalore | $28^{\circ} \mathrm{C}$ | $21^{\circ} \mathrm{C}$ |
| Chennai | $36^{\circ} \mathrm{C}$ | $27^{\circ} \mathrm{C}$ |
| Delhi | $38^{\circ} \mathrm{C}$ | $28^{\circ} \mathrm{C}$ |
| Jaipur | $39^{\circ} \mathrm{C}$ | $29^{\circ} \mathrm{C}$ |
| Jammu | $41^{\circ} \mathrm{C}$ | $26^{\circ} \mathrm{C}$ |
| Mumbai | $32^{\circ} \mathrm{C}$ | $27^{\circ} \mathrm{C}$ |

Plot a double bar graph using the data and answer the following:
(i) Which city has the largest difference in the minimum and maximum temperature on the given date?
(ii) Which is the hottest city and which is the coldest city?
(iii) Name two cities where maximum temperature of one was less than the minimum temperature of the other.
(iv) Name the city which has the least difference between its minimum and the maximum temperature.

Answer:


■ : Max temperature

- Min temperature

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(i) Jammu has the largest difference in the minimum and maximum temperature on the given data i.e., $15^{\circ} \mathrm{C}$.
(ii) Jammu is the hottest city with $41^{\circ} \mathrm{C}$ and Bangalore is the coldest city with $21^{\circ} \mathrm{C}$.
(iii) Bangalore and Jaipur or Bangalore and Ahmedabad are the two cities where maximum temperature of one was less than the minimum temperature of other.
(iv) Mumbai has the least difference between its minimum and maximum temperature.

Maximum temperature $=32^{\circ} \mathrm{C}$
Minimum temperature $=27^{\circ} \mathrm{C}$
$\therefore$ Difference $=\left(32^{\circ} \mathrm{C}-27^{\circ} \mathrm{C}\right)=5^{\circ} \mathrm{C}$

