Mathematics

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(Chapter – 3) (Data Handling)
(Class – VII)

Exercise 3.3

Question 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?

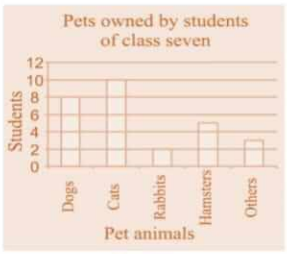


Fig 3.3

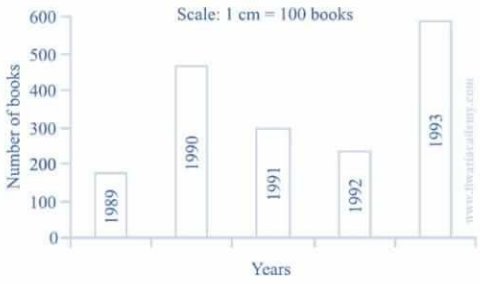
Answer 1:

(a) Cat is the most popular pet.

(b) 8 students have dog as a pet.

Question 2:

Read the bar graph 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 2:

According to the given bar graph,

(i) (a) In 1989, 180 books were sold. (b) In 1990, 475 books were sold.
(c) In 1992, 225 books were sold.

(ii) In 1990, about 475 books were sold and in 1992, about 225 books were sold.

(iii) In 1989 and 1992 fewer than 250 books were sold.

(iv) By reading the graph, we calculate that 180 books were sold in 1989.

Question 3:

Number of children in six different classes are given below. Represent the data on a bar graph.

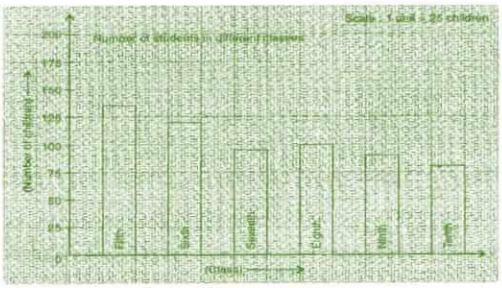
Class	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth
No. of children	135	120	95	100	90	80

(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 eighth.



Answer 3:

Data represented by the bar graph is as follows:

(a) Scale: 1 unit = 25 children

(b) (i) Fifth class has the maximum number of children and Tenth class has the minimum number of children.

(ii) $\text{Ratio} = \dfrac{\text{Number of students in class sixth}}{\text{Number of students in class eighth}} = \dfrac{120}{100} = \dfrac{6}{5} = 6:5$

Question 4:

The performance of a student in 1st term and 2nd term is given. Draw a double bar graph choosing appropriate scale and answer the following:

Subject	English	Hindi	Maths	Science	S. Science
1st term (MM. 100)	67	72	88	81	73
2nd term (MM (100)	70	65	95	85	75

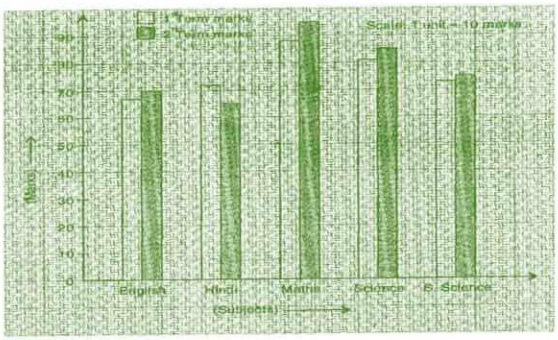
(i) In which subject has the child improved his performance the most?
(ii) In which subject is the improvement the least?
(iii) Has the performance gone down in any subject?

Answer 4:

Data represented by bar graph is as follows:

Difference of marks of 1st term and 2nd term

English = 70 – 67 = 3
Hindi = 65 – 72 = –7
Maths = 95 – 88 = 7
Science = 85 – 81 = 4
S. Science = 75 – 73 = 2



(i) He has most improved in Maths subject.
(ii) In S. Science subject, his improvement is less.
(iii) Yes, in Hindi subject, his performance has gone down.

Question 5:

Consider this data collected from a survey of a colony.

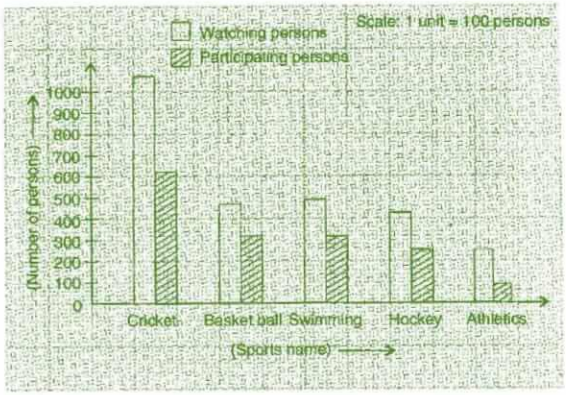
Favourite Sport	Cricket	Basket Ball	Swimming	Hockey	Athletics
Watching	1240	470	510	423	250
Participating	620	320	320	250	105

(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 5:

Data represented by the double bar graph is as follows:

(i) This bar graph represents the number of persons who are watching and participating in their favourite sports.



(ii) Cricket is most popular.
(iii) Watching sports is more preferred.

Question 6:

Take the data giving the minimum and the maximum temperature of various cities given in the beginning of this Chapter. Plot a double bat graph using the data and answer the following:

Temperature of Cities as on 20.6.2006

City	Ahmedabad	Amritsar	Bangalore	Chennai
Max.	38° C	37° C	28° C	36° C
Min.	29° C	26° C	21° C	27° C
City	Delhi	Jaipur	Jammu	Mumbai
Max.	38° C	39° C	41° C	32° C
Min.	28° C	29° C	26° C	27° C

(i) Which city has the largest difference in the minimum and maximum temperature on the given data?

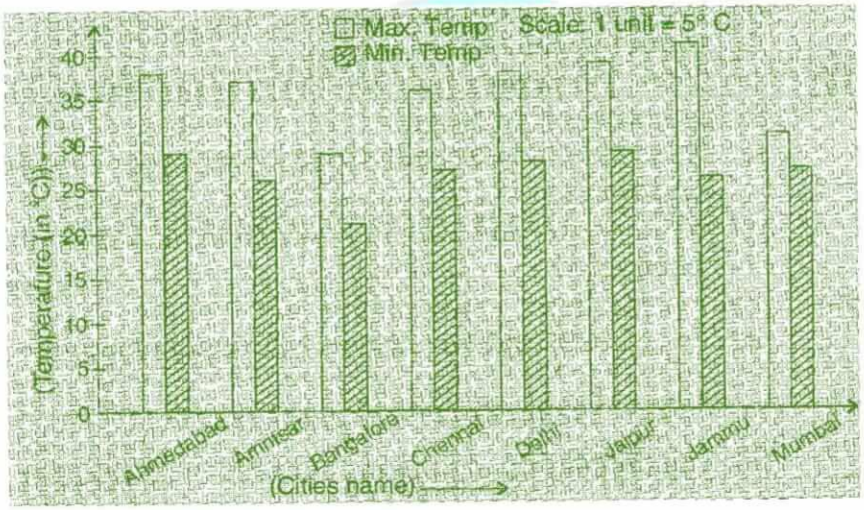
(ii) Which is the hottest city and which is the coldest city?

(iii) Name two cities where maximum temperature of one was less than the minimum temperature of the order.

(iv) Name the city which has the least difference between its minimum and the maximum temperature.

Answer 6:

Data represented by double bar graph is as follows:



(i) Jammu has the largest difference in temperature i.e.,
Maximum temperature = 41°C and
Minimum temperature = 26°C.
∴ Difference = 41°C – 26°C = 15°C

(ii) Jammu is the hottest city due to maximum temperature is high and Bangalore is the coldest city due to maximum temperature is low.

(iii) Maximum temperature of Bangalore is 28°C
Minimum temperature of two cities whose minimum temperature is higher than the maximum temperature of Bangalore are Ahemedabad and Jaipur where the minimum temperature is 29°C

(iv) Mumbai has the least difference in temperature i.e.,
Maximum temperature = 32°C and
Minimum temperature = 27°C
∴ Difference = 32°C – 27°C = 5°C