

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:

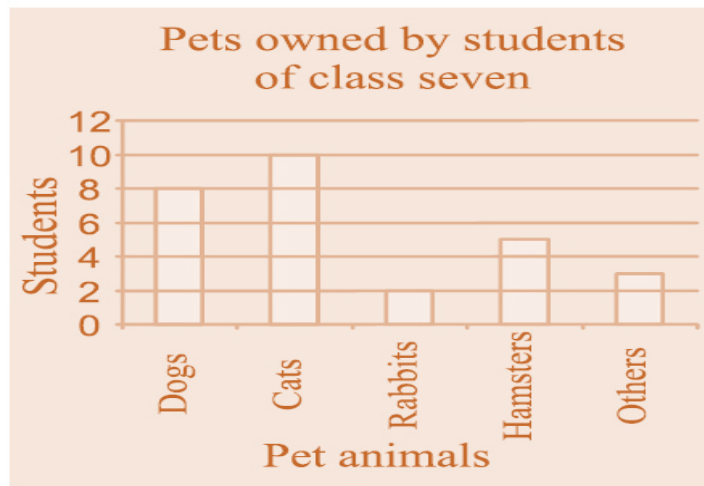


Fig 3.3

- (a) Which is the most popular pet?
- (b) How many students have dog as a pet?

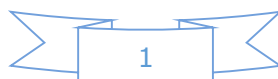
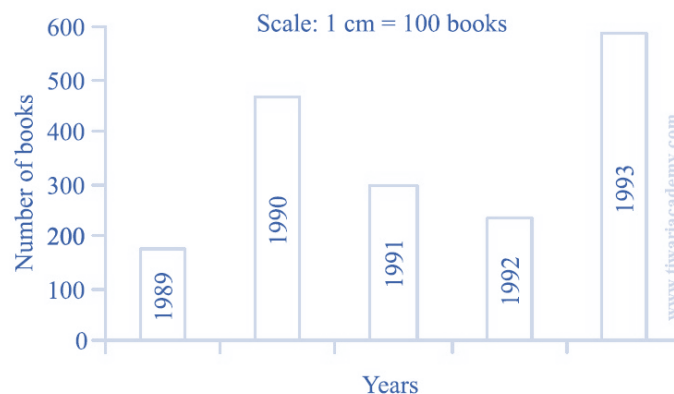


Answer 1:

- (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:



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- (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:



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

Question 4:

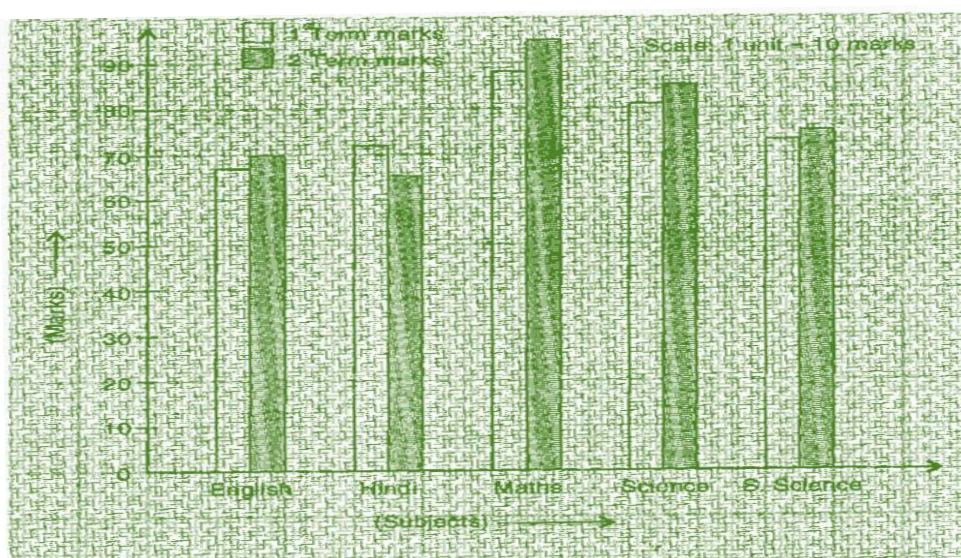
The performance of a student in 1st term and 2nd term is given. Draw a double bar graph choosing appropriate scale and answer the following:

Subject	English	Hindi	Maths	Science	S. Science
1 st term (MM. 100)	67	72	88	81	73
2 nd 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:



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Difference of marks of 1st term and 2nd term

$$\text{English} = 70 - 67 = 3$$

$$\text{Hindi} = 65 - 72 = -7$$

$$\text{Maths} = 95 - 88 = 7$$

$$\text{Science} = 85 - 81 = 4$$

$$\text{S. Science} = 75 - 73 = 2$$

- (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:

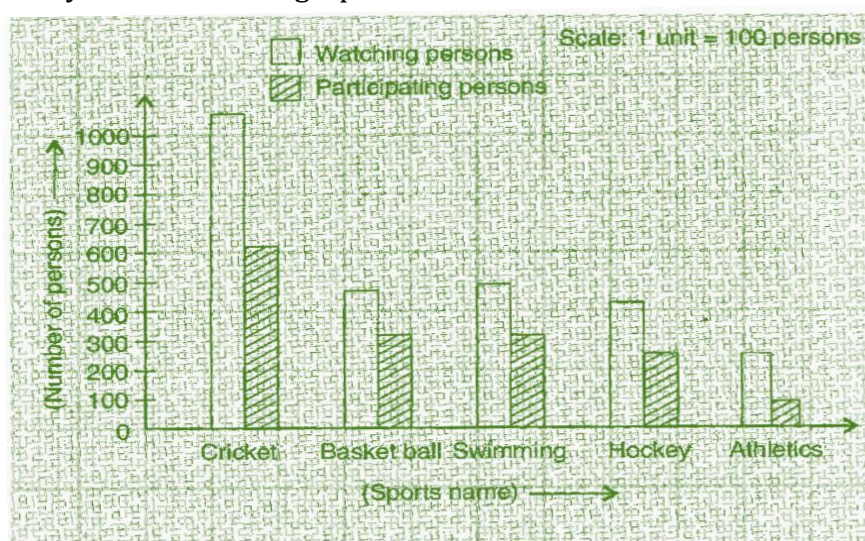
Consider this data collected from a survey of a colony.

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:



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- (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 bar 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 other.
- (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:

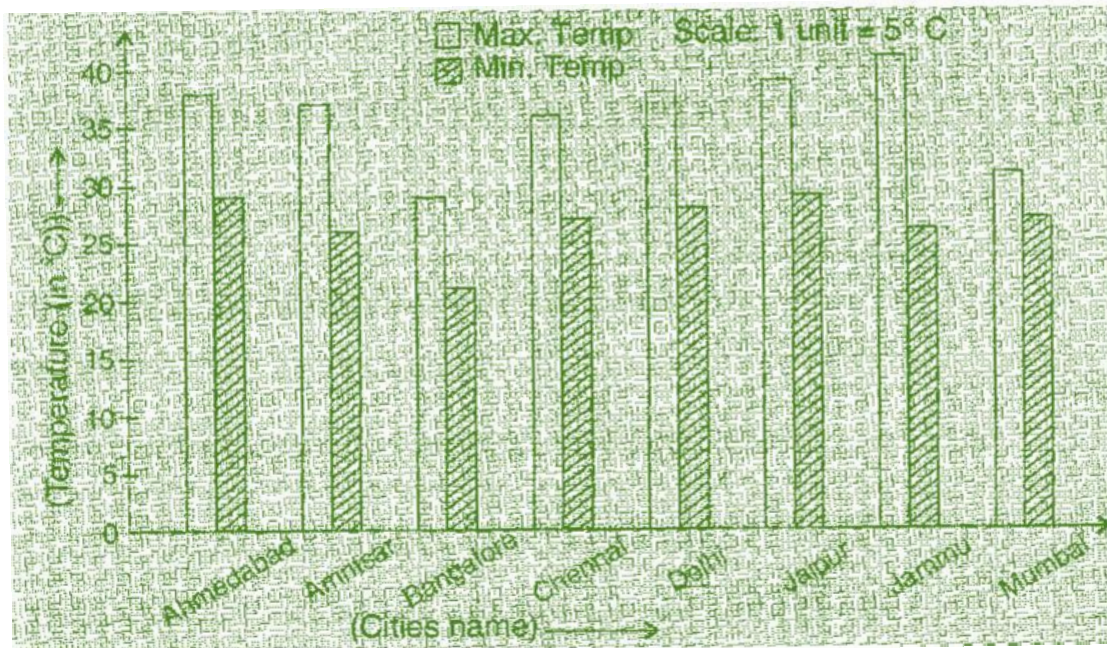


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- (i) Jammu has the largest difference in temperature i.e.,
Maximum temperature = 41°C and
Minimum temperature = 26°C .
 $\therefore$ Difference = $41^{\circ}\text{C} - 26^{\circ}\text{C} = 15^{\circ}\text{C}$
- (ii) Jammu is the hottest city due to 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 Ahmedabad 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
 $\therefore$ Difference = $32^{\circ}\text{C} - 27^{\circ}\text{C} = 5^{\circ}\text{C}$