



परमाणु ऊर्जा शिक्षण संस्था, मुंबई  
Atomic Energy Education Society, Mumbai

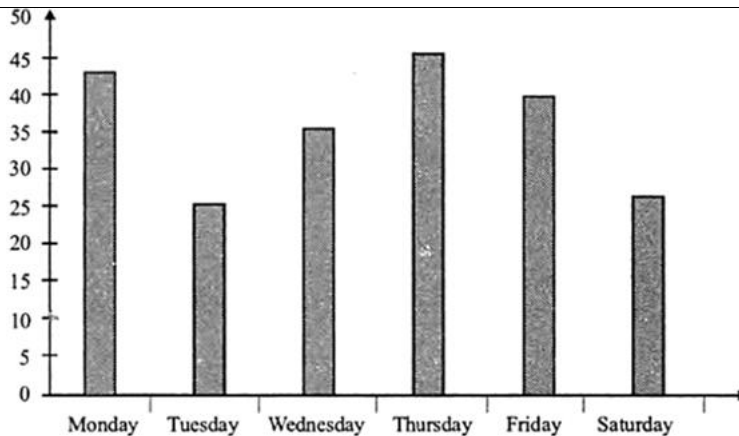
Class :VII

Worksheet No.-1

Subject:- Mathematics

Name of the chapter :- Data Handling

Section A		
1	The mode of a set of observations is the value which a) occurs most frequently b) is central c) is between maximum and minimum d) none of the foregoing	[1]
2	The median of the following data 46, 64, 87, 41, 58, 77, 35, 90, 55, 33, 92, is a) 58 b) 60.2 c) 77 d) 87	[1]
3	Find the median of the data set, which shows the weights (in pounds) of 10 students in Mr. Brij's class. 61, 56, 60, 57, 62, 63, 63, 63, 58 and 73 a) 65 b) 61.5 c) 63 d) 64	[1]
4	Let x, y, z be three observations. The mean of these observations is a) $\frac{x+y+z}{3}$ b) $\frac{x \times y \times z}{3}$ c) $\frac{x \times y + z}{3}$ d) $\frac{x - y - z}{3}$	[1]
5	The heights (in inches) of 10 students in Mr. Tej's class are 64, 59, 63, 60, 65, 66, 66, 66, 61 and 76. Find the range of the heights of the students. a) 16 b) 14 c) 15 d) 17	[1]
6	Given below a graph representing the number of electric bulbs sold by a shopkeeper during a	[1]



week of the month:

What is the ratio of minimum and maximum sale?

- a) 5 : 8
- b) 5 : 4
- c) 5 : 3
- d) 5 : 9

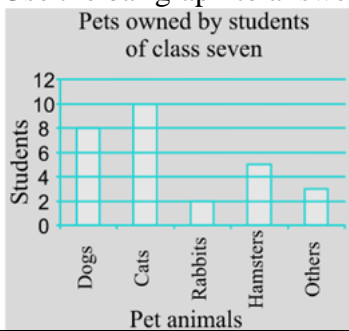
7	Listed below are the temperatures in °C for 10 days. - 6 , - 8 , 0 , 3 , 2 , 0 , 1 , 5 , 4 , 4 What is the range of the data? a) 12°C b) 8°C c) 13°C d) 10°C	[1]
8	In a World Cup final match against Srilanka, for six times Sachin Tendulkar hits a six out of 30 balls he plays. What is the probability that in a given throw, the ball does not hit a six? a) $\frac{5}{4}$ b) $\frac{4}{5}$ c) $\frac{3}{4}$ d) $\frac{1}{4}$	[1]
9	The mean of first five prime numbers is a) 7 b) 5.6 c) 3 d) 3.6	[1]
10	Mean of a set of observations is the value which a) occurs most frequently b) is a representative of whole group c) divides observations into two equal parts d) is the sum of observations.	[1]
<b>Section B</b>		
11	State true or false: Mean, median and mode are the measures of central tendency.	[1]
12	State true or false: The range of the data 3, 7, 1, - 2, 2, 6, - 3, - 5 would change if 8 was added to each value in	[1]

	the data.	
13	State true or false: The mode is always one of the numbers in a data.	[1]
14	Fill in the blanks: The range of the data 6, 8, 16, 22, 8, 20, 7, 25 is _____.	[1]
15	Fill in the blanks: If there are two middle numbers in the list, the median is the _____ of the two middle numbers.	[1]
16	Fill in the blanks: The difference between the highest and the lowest observation of data is called _____.	[1]
17	<b>Assertion (A):</b> The median of the distribution 2, 3, 4, 7, 5, 1, 6 is 4. <b>Reason (R):</b> The middle most observation of a data series is called the median of the series. a) Both A and R are true and R is the correct explanation of A. b) Both A and R are true but R is not the correct explanation of A. c) A is true but R is false. d) A is false but R is true.	[1]
18	<b>Assertion (A):</b> Mean is one of the numbers in data. <b>Reason (R):</b> The data 6, 4, 3, 8, 9, 12, 13, 9 has mean 8. a) Both A and R are true and R is the correct explanation of A. b) Both A and R are true but R is not the correct explanation of A. c) A is true but R is false. d) A is false but R is true.	[1]
19	<b>Assertion (A):</b> In the histogram X - axis represents frequency. <b>Reason (R):</b> In the histogram, the bars are placed continuously side by side with no gap between adjacent bars. a) Both A and R are true and R is the correct explanation of A. b) Both A and R are true but R is not the correct explanation of A. c) A is true but R is false. d) A is false but R is true.	[1]
20	<b>Assertion (A):</b> Median describes the centre of a set of data. <b>Reason (R):</b> Median of the data 46, 64, 87, 41, 58, 77, 35, 90, 55, 33, 92 is 58. a) Both A and R are true and R is the correct explanation of A. b) Both A and R are true but R is not the correct explanation of A. c) A is true but R is false. d) A is false but R is true.	[1]
	<b>Section C</b>	
21	Find the mode of the given data: 10, 8, 4, 7, 8, 11, 1, 5, 8, 4, 2, 3, 6, 8	[2]
22	The enrolment of a school during six consecutive years was as follows: 1555, 1670, 1750, 2013, 2540, 2820. Find the mean enrolment of the school for this period.	[2]
23	A batsman scored the number of runs in six innings: 36, 35, 50, 46, 60, 55 Calculate the mean runs scored by him in an inning.	[2]
24	Take the data giving the minimum and the maximum temperature of various cities given in Table. Plot a double bar graph using the data and answer the question: Name the city which has the least difference between its minimum and the maximum temperature.	[2]

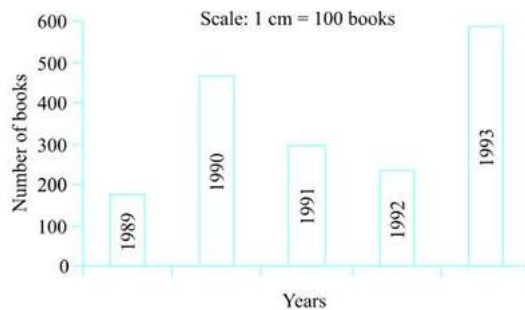
Temperatures of Cities as on 20.6.2006		
City	Max.	Min.
Ahmedabad	38 ° C	29 ° C
Amritsar	37 ° C	26 ° C
Banglore	28 ° C	21 ° C
Chennai	36 ° C	27 ° C
Delhi	38 ° C	28 ° C
Jaipur	39 ° C	28 ° C
Jammu	41 ° C	26 ° C
Mumbai	32 ° C	27 ° C

25 For the given data given below, calculate the mean of its median and mode.  
6, 2, 5, 4, 3, 4, 4, 2, 3 [2]

26 Use the bar graph to answer the question: Which is the most popular pet? [2]

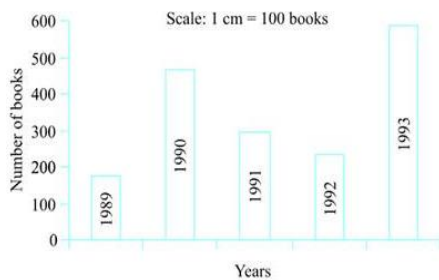


27 Read the bar graph (Fig) which shows the number of books sold by a bookstore during five consecutive years and answer the question: Can you explain how you would estimate the [2]



number of books sold in 1989?

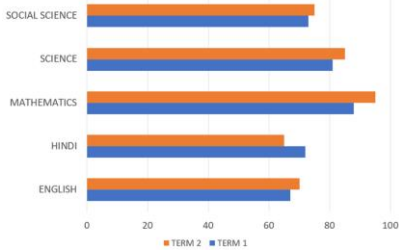
28 Read the bar graph (Fig) which shows the number of books sold by a bookstore during five consecutive years and answer the question: In which years were fewer than 250 books sold? [2]



29 The performance of a student in 1st Term and 2nd Term is given. Draw a double bar graph choosing appropriate scale and answer the question: [2]

	<table border="1"> <thead> <tr> <th>Subject</th> <th>1<sup>st</sup> term(M.M.100)</th> <th>2<sup>nd</sup> term(M.M. 100)</th> </tr> </thead> <tbody> <tr> <td>English</td> <td>67</td> <td>70</td> </tr> <tr> <td>Hindi</td> <td>72</td> <td>65</td> </tr> <tr> <td>Maths</td> <td>88</td> <td>95</td> </tr> <tr> <td>Science</td> <td>81</td> <td>85</td> </tr> <tr> <td>S. Science</td> <td>73</td> <td>75</td> </tr> </tbody> </table> <p>In which subject, has the child improved his performance the most?</p>	Subject	1 <sup>st</sup> term(M.M.100)	2 <sup>nd</sup> term(M.M. 100)	English	67	70	Hindi	72	65	Maths	88	95	Science	81	85	S. Science	73	75	
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30	<p>Consider this data collected from a survey of a colony.</p> <table border="1"> <thead> <tr> <th>Favourite Sport</th> <th>Cricket</th> <th>Basket Ball</th> <th>Swimming</th> <th>Hockey</th> <th>Athletics</th> </tr> </thead> <tbody> <tr> <td>Watching</td> <td>1240</td> <td>470</td> <td>510</td> <td>423</td> <td>250</td> </tr> <tr> <td>Participating</td> <td>620</td> <td>320</td> <td>320</td> <td>250</td> <td>105</td> </tr> </tbody> </table> <p>Which is more preferred, watching or participating in sports?</p>	Favourite Sport	Cricket	Basket Ball	Swimming	Hockey	Athletics	Watching	1240	470	510	423	250	Participating	620	320	320	250	105	[2]
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32	<p>Sale of English and Hindi books in the year 1995, 1996, 1997 and 1998 are given below. Draw a double bar graph and answer the following questions :</p> <table border="1"> <thead> <tr> <th>Year</th> <th>1995</th> <th>1996</th> <th>1997</th> <th>1998</th> </tr> </thead> <tbody> <tr> <td>English</td> <td>350</td> <td>400</td> <td>450</td> <td>620</td> </tr> <tr> <td>Hindi</td> <td>500</td> <td>525</td> <td>600</td> <td>650</td> </tr> </tbody> </table> <ol style="list-style-type: none"> <li>In which year was the difference in the sale of the two language books least?</li> <li>Can you say that the demand for English books rose faster? Justify.</li> </ol>	Year	1995	1996	1997	1998	English	350	400	450	620	Hindi	500	525	600	650	[3]			
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34	<p>A die was thrown 15 times and following outcomes were recorded: 5, 3, 4, 1, 2, 6, 4, 2, 2, 3, 1, 5, 6, 1, 2 .</p>	[3]																		

	Find the mean, median mode of the data.																												
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36	<p>The rainfall (in mm) in a city on 7 days of a certain week was recorded as follows:</p> <table border="1"> <thead> <tr> <th>Day</th> <th>Mon</th> <th>Tues</th> <th>Wed</th> <th>Thurs</th> <th>Fri</th> <th>Sat</th> <th>Sun</th> </tr> </thead> <tbody> <tr> <td>Rainfall (in mm)</td> <td>0.0</td> <td>12.2</td> <td>2.1</td> <td>0.0</td> <td>20.5</td> <td>5.5</td> <td>1.0</td> </tr> </tbody> </table> <ol style="list-style-type: none"> <li>Find the range of the rainfall in the above data.</li> <li>Find the mean rainfall for the week.</li> <li>On how many days was the rainfall less than the mean rainfall</li> </ol>	Day	Mon	Tues	Wed	Thurs	Fri	Sat	Sun	Rainfall (in mm)	0.0	12.2	2.1	0.0	20.5	5.5	1.0	[5]											
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37	<p>Percentage wins in ODI by 8 top cricket teams.</p> <table border="1"> <thead> <tr> <th>Teams</th> <th>From Champions Trophy to World Cup-06</th> <th>Last 10 ODI in 07</th> </tr> </thead> <tbody> <tr> <td>South Africa</td> <td>75%</td> <td>78%</td> </tr> <tr> <td>Australia</td> <td>61%</td> <td>40%</td> </tr> <tr> <td>Sri Lanka</td> <td>54%</td> <td>38%</td> </tr> <tr> <td>New Zealand</td> <td>47%</td> <td>50%</td> </tr> <tr> <td>England</td> <td>46%</td> <td>50%</td> </tr> <tr> <td>Pakistan</td> <td>45%</td> <td>44%</td> </tr> <tr> <td>West Indies</td> <td>44%</td> <td>30%</td> </tr> <tr> <td>India</td> <td>43%</td> <td>56%</td> </tr> </tbody> </table>	Teams	From Champions Trophy to World Cup-06	Last 10 ODI in 07	South Africa	75%	78%	Australia	61%	40%	Sri Lanka	54%	38%	New Zealand	47%	50%	England	46%	50%	Pakistan	45%	44%	West Indies	44%	30%	India	43%	56%	[5]
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38	<p>The heights of 10 girls were measured in cm and the results are as follows:, 150, 139, 128, 151, 132, 146, 149, 143, 141.</p> <ol style="list-style-type: none"> <li>What is the height of the tallest girl?</li> <li>What is the height of the shortest girl?</li> <li>What is the range of the data?</li> <li>What is the mean height of the girls?</li> <li>How many girls have heights more than the mean height.</li> </ol>	[5]																											
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39	<p><b>Read the text carefully and answer the questions:</b> The performance of a student in 1st Term and 2nd Term is given in the form of double bar graph. Answer the following questions.</p>	[5]																											

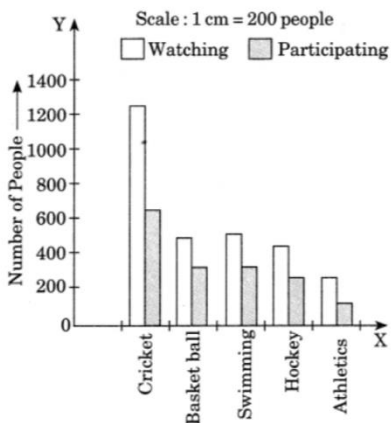


- The scale is 1 unit = \_\_\_\_\_ marks.
- In which subject, has the child improved his performance the most?
  - In Social science, the performance of the student improved the most.
  - In science, the performance of the student improved the most.
  - In Maths, the performance of the student improved the most.
  - In Hindi, the performance of the student improved the most.
- In which subject is the improvement the least?
  - In social science, the performance of the student improved the least.
  - In English, the performance of the student improved the least.
  - In Mathematics, the performance of the student improved the least.
  - In Science, the performance of the student improved the least.
- Has the performance gone down in any subject?
  - Yes, in Hindi the performance of the student has gone down.
  - Yes, in Mathematics the performance of the student has gone down.
  - Yes, in science the performance of the student has gone down.
  - Yes, in English the performance of the student has gone down.
- Above graph shows that student is good in Mathematics

40 **Read the text carefully and answer the questions:** Consider this data collected from a survey of a colony. Read the bar graph and answer the following questions.

[5]

Favourite sport	Cricket	Basketball	Swimming	Hockey
Watching	1240	470	510	430
Participating	620	320	320	250



- The above bar graph depicts the number of people who are \_\_\_\_\_ and \_\_\_\_\_ in sports.
- Which sport is most popular?
  - Basket Ball

	<p>b) Swimming c) Cricket d) Hockey</p> <p>3. Which is more preferred, watching or participating in sports? a) Participating b) Watching c) Both Participating and Watching d) None of these</p> <p>4. Find the difference between the number of people watching the games to number of people participating in the games. a) 1825 b) 1285 c) 1925 d) 1295</p> <p>5. Swimming is least popular sport. (a) True (b) False.</p>	
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