

MATHEMATICS FOR 7TH CLASS (FOR SINDH)

Unit 13

INFORMATION HANDLING

EXERCISE NO. 13.1

1. A book store sold the following number of story books, last week. Construct a frequency distribution table.

Name of Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Books Sold	24	25	27	28	22	30	21

Solution:

Ascending order:

21, 22, 24, 25, 27, 28, 30

Group	Period of Class Interval	Tally Marks	Frequency
1 st	21 – 22	II	2
2 nd	23 – 24	I	1
3 rd	25 – 26	I	1
4 th	27 – 28	II	2
5 th	29 – 30	I	1

2. The electricity bills paid by 12 consumers are given below. Make a Frequency distribution table of 5 classes of an equal size.

Rs. 5100, Rs. 7000, Rs. 3560, Rs. 6030, Rs. 4220, Rs. 6740, Rs. 4810, Rs. 5450, Rs. 7180, Rs. 5920, Rs. 6850 and Rs. 5690.

Solution:

Ascending order:

3560, 4222, 4810, 5100, 5450, 5690, 5920, 6030, 6740, 6850, 7000, 7180.

MATHEMATICS FOR 7TH CLASS (FOR SINDH)

Group	Period of Class Interval	Tally Marks	Frequency
1 st	3001 – 4000	I	1
2 nd	4001 – 5000	II	2
3 rd	5001 – 6000	III	4
4 th	6001 – 7000	III	3
5 th	7001 – 8000	II	2

3. In an annual examination, 20 students of a school got the following marks out of 850 marks. Construct a frequency distribution table by taking 100 as a class interval.

551, 786, 678, 725, 788, 580, 720, 690, 750, 651, 599, 609, 719, 760, 625, 775, 646, 667, 753, 675.

Solution:

Ascending Order:

551, 580, 599, 609, 625, 646, 651, 667, 675, 678, 690, 719, 720, 725, 750, 753, 760, 775, 786, 788

Frequency Chart:

The frequency of (55 – 650) is 6. Here 6 students obtained marks 551 to 650.

The frequency of (651 – 750) is 9. Here 9 students obtained marks 651 to 750.

The frequency of (751 – 850) is 5. Here 5 students obtained marks 751 to 850.

Group	Period of Class Interval	Tally Marks	Frequency
1 st	551 – 650	HH I	6
2 nd	651 – 750	HH IIII	9
3 rd	751 – 850	HH	5

MATHEMATICS FOR 7TH CLASS (FOR SINDH)

4. The following data shows the number of children who visited the zoo in last month.

134, 167, 145, 130, 155, 142, 130, 180,
162, 130, 120, 165, 170, 110, 200, 185,
132, 140, 110, 170, 100, 160, 133, 150,
125, 110, 145, 155, 160, 200

Solution:

Ascending Order:

100, 110, 110, 110, 120, 120, 125, 130, 130, 130,
132, 134, 140, 140, 142, 145, 150, 155, 160, 160, 162,
165, 167, 170, 170, 180, 185, 200, 200.

Group	Period of Class Interval	Tally Marks	Frequency
1 st	100 – 120	HHH	5
2 nd	121 – 140	HHH III	8
3 rd	141 – 160	HHH III	8
4 th	161 – 180	HHH I	6
5 th	181 – 200	III	3

5. There are 30 students in class VII who secured following marks in a Mathematics Test.

45, 19, 49, 17, 37, 10, 25, 28, 50, 46, 43,
34, 25, 50, 48, 46, 42, 34, 33, 11, 28, 19,
30, 17, 13, 11, 39, 41, 35, 34.

Solution:

Ascending Order:

10, 11, 11, 13, 17, 17, 19, 19, 25, 25, 28, 28, 30, 33,
34, 34, 34, 35, 37, 39, 41, 42, 43, 45, 46, 46, 48, 49, 50, 50.

Group	Period of Class Interval	Tally Marks	Frequency
1 st	10 – 17	HHH I	6
2 nd	18 – 25	III	4
3 rd	26 – 33	III	4
4 th	34 – 41	HHH II	7
5 th	42 – 50	HHH III	9

MATHEMATICS FOR 7TH CLASS (FOR SINDH)

EXERCISE 13.2

1. In mathematics quiz 80 students appeared. 60 students passed and 20 students failed. Represent it through pie chart.

Solution:

Total number of students = 80
 Number of students passed = 60
 Number of students fail = 20

Formula:

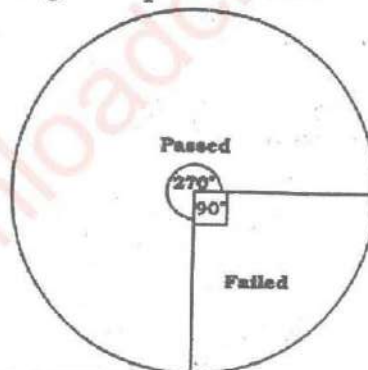
$$\text{Required angle} = \frac{\text{No of students pass}}{\text{Total number of students}} \times 360$$

$$\text{Required angle of passed stds} = \frac{60}{80} \times 360 = \frac{2160}{8} = 270$$

$$\text{Required angle of passed stds} = 270^\circ$$

$$\text{Required angle of failed stds} = \frac{20}{80} \times 360 = 90$$

$$\text{Required angle of failed stds} = 90^\circ$$



2. In class VII there are 36 students. The favourite colours of 16 is red. 9 is blue, 7 is pink. 4 students like white colour. Make a pie chart it.

Solution:

Total number of student = 36
 Measure of angle associated with red color

MATHEMATICS FOR 7TH CLASS (FOR SINDH)

$$= \frac{16}{36} \times 360 = \frac{5760}{36} = 160^\circ$$

Measure of angle associated with red color = 160°

Measure of angle associated with blue color

$$= \frac{9}{36} \times 360 = 90^\circ$$

Measure of angle associated with blue color = 90°

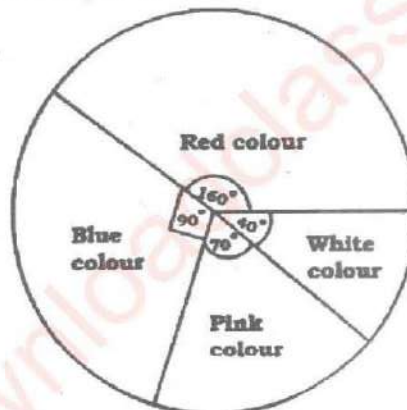
Measure of angle associated with pink color

$$= \frac{7}{36} \times 360 = \frac{2520}{36} = 70^\circ$$

Measure of angle associated with white color

$$= \frac{4}{9} \times 40 = 40^\circ$$

Measure of angle associated with white color = 40°



3. Sara and her friends eat fruits in a week as shown in the table.

Name of Fruit	Apple	Banana	Mango	Peach
No. of Fruits	12	24	16	8

By using the table draw a pie graph.

Solution:

Total Number of fruits = 60

MATHEMATICS FOR 7TH CLASS (FOR SINDH)

Measure of angle associated with apple

$$= \frac{12}{60} \times \frac{72}{360} = 72^\circ.$$

Measure of angle associated with banana

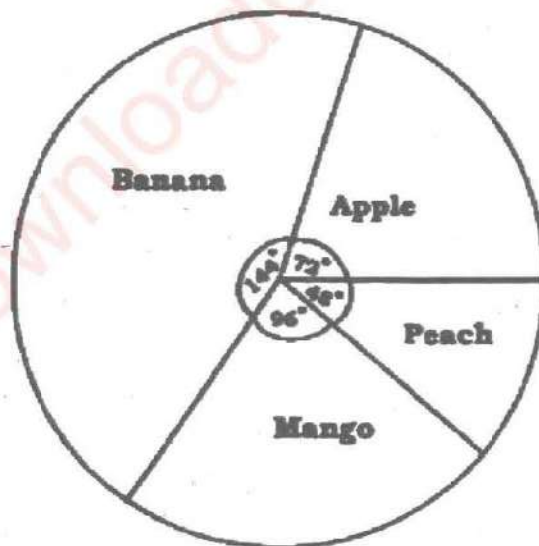
$$= \frac{24}{60} \times \frac{72}{360} = 144^\circ.$$

Measure of angle associated with Mango

$$= \frac{16}{60} \times \frac{24}{360} = 96^\circ.$$

Measure of angle associated with peach

$$= \frac{8}{60} \times \frac{24}{360} = 48 = 48^\circ.$$



MATHEMATICS FOR 7TH CLASS (FOR SINDH)

4. In a parts. Mr. Jamal served the guest by following food items.

Food Items	Cold drink	Sandwich	Burger	Samosa
Quantity	180	124	330	86

Use the table to draw a pie graph.

Solution:

Total numbers of food items = 720

Measure of angle associated with cold drinks

$$= \frac{180}{720} \times \frac{360}{4} = 90^\circ.$$

Measure of angle associated with sandwich

$$= \frac{124}{720} \times \frac{360}{62} = 62^\circ.$$

Measure of angle associated with burger

$$= \frac{330}{720} \times \frac{360}{165} = \frac{118800}{720} = 165^\circ.$$

Measure of angle associated with samosa

$$= \frac{86}{720} \times \frac{360}{43} = \frac{30960}{720} = 43^\circ.$$



MATHEMATICS FOR 7TH CLASS (FOR SINDH)

5. The following data shows the distance in km that Hooria travelled in last month.

90, 44, 55, 49, 28, 9, 92, 27, 18, 84, 50, 60, 79, 69, 24, 89, 63, 74, 35, 48, 39, 80.

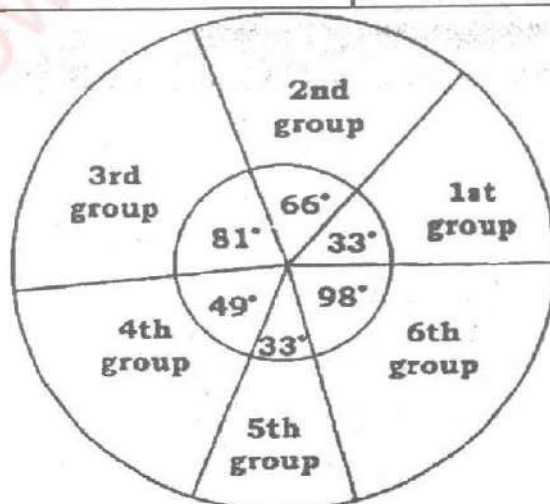
Construct the frequency table using 6 as class interval of an equal size. Also draw its pie chart.

Solution:

Ascending Order:

9, 18, 24, 27, 28, 35, 39, 44, 48, 49, 50, 55, 60, 63, 69, 74, 79, 80, 84, 89, 90, 92

Group	Period of Class Interval	Tally Marks	Frequency
1 st	9 – 22	II	2
2 nd	23 – 36	IIII	4
3 rd	37 – 50	IIII	5
4 th	51 – 64	III	3
5 th	65 – 78	II	2
6 th	79 – 92	IIII I	6

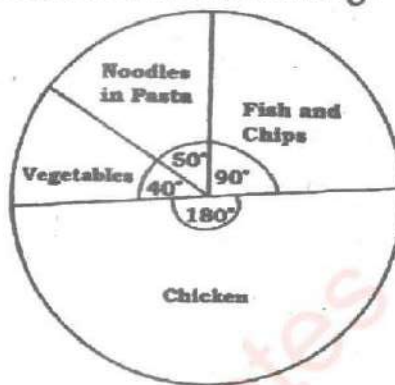


MATHEMATICS FOR 7TH CLASS (FOR SINDH)

6. Hina asked 180 students, about their favourite meal. She drew a pie graph.

Ans: Read the pie-graph and answer the following:

- What is the most favourite meal? And how many students liked it?
- Which food is liked by the least number of students? And how many students liked it?
- How many students liked noodles in pasta?
- Use the pie graph and complete the table.



Favourite	Frequency	Angle
Chicken	90	180°
Noodles in Pasta		50°
Vegetables		
Fish and Chips	40	
Total	180	

Solution:

Favourite	Frequency	Angle
Chicken	90	180°
Noodles in Pasta	25	50°
Vegetables	20	40°
Fish and Chips	45	90°
Total	180	360°

- Ans:** (i) Chicken: 90 Students
 (ii) Vegetables, 20 Students
 (iii) 25 Students

MATHEMATICS FOR 7TH CLASS (FOR SINDH)

REVIEW EXERCISE 13

1. Fill in the blanks:

- (i) Information are called data which are normally the results of measurements, observations or experiments.
- (ii) The number of values that occurs in a group of data is called frequency .
- (iii) A data is collected in raw form and it provides us information about individuals.
- (iv) The smallest value of a class interval is called lower class limit .
- (v) The table which shows the frequency of class intervals is called frequency table .
- (vi) After collection of data, the most important step is presentation .
- (vii) The method which is used to record the result is called Tallying .
- (viii) The greatest value of a class interval is called the upper class limit.
- (ix) The number of values in class interval is called its size or length .
- (x) The representation of a numerical data in the form of sectors of a circle is called a pie graph .

2. Choose the correct answer:

- (i) In pie graph, the measure of central angle is:
(a) 90° (b) 18° (c) 24° (d) 360°

Ans: (d) 360°

MATHEMATICS FOR 7TH CLASS (FOR SINDH)

(ii) In the class interval (10 – 50), the upper class limit is:

- (a) 11 (b) 10 (c) 50 (d) 51

Ans: (c) 50

(iii) The grouped data, greatest value = 21, lowest value = 3, and of into 3, then the size of the class is:

- (a) (b) 6 (c) 18 (d) 21

Ans: (b) 6

3. The ages of visitor in park during a week are given below group the data taking 10 as the size of an interval.

25, 50, 49, 47, 26, 10, 2, 1, 15, 17, 18, 19, 27, 28, 30, 35, 17, 32, 31, 3, 4, 10, 15, 12, 13, 17, 24, 20, 22, 24, 26, 30, 17, 35, 40, 36, 32, 31, 37.

Solution:

Ascending Order:

1, 2, 3, 4, 9, 10, 12, 13, 15, 17, 17, 18, 19, 20, 22, 24, 25, 26, 27, 28, 30, 31, 32, 32, 35, 35, 36, 37.

Group	Period of Class Interval	Tally Marks	Frequency
1 st	1 – 10	II	7
2 nd	11 – 20		11
3 rd	21 – 30		9
4 th	31 – 40		9
5 th	41 – 50		3