



INDIAN SCHOOL AL WADI AL KABIR

Class X, Mathematics

Worksheet-Statistics

26 – 08 - 2023

Q. No.

Case Study Based

I.

Horticultural department has tasked their statistical officer to create a model for farmers to be able to predict their produce output based on various factors. A box containing 200 apples was opened and each apple was weighed. The distribution of the weight of the apples is given in the following table:

Weight (in grams)	80-100	100-120	120-140	140-160	160-180	180-200
No. of apples	25	34	50	42	38	11

Based on the above information answer the following questions.



1.	How many apples are in the range 140-160 grams?	1m
2.	What is the class mark of the class 160-180?	1m
3.	What is the mean weight of the apples?	2m
4.	What is the modal weight of the apples?	2m

II

An agency has decided to install customised playground equipment at various colony parks. For that they decided to study the age-group of children playing in a park of the particular colony. The classification of children according to their ages, playing in a park is shown in the following table.

Age(in years)	6 - 8	8 - 10	10 - 12	12 - 14	14 - 16
No. of children	43	58	70	42	27



Based on the above information answer the following questions.

5.	The maximum number of children are in the age group:	1m
6.	What is the lower limit of the modal class?	1m
7.	What is the modal age of children playing in the park?	2m
8.	Find the sum of the lower limit of the modal class and upper limit of the median class.	2m

III

In a Vidyalaya there are two sections A and B. 39 students are there in section A and in section B there are 41 students. A periodic test was conducted to assess the performance of students thereafter analyze and plan the teaching learning process accordingly. The marks obtained out of 40 are given below in the table.

Marks obtained by the students	Number of students
Less than 5	3
Less than 10	12
Less than 15	22
Less than 20	35
Less than 25	42
Less than 30	60
Less than 35	71
Less than or equal to 40	80



Based on the above information answer the following questions:

9.	Arrange the given data in class intervals.	1m
10.	How many students have obtained more than or equal to 35 marks?	1m
11.	Find the median of the marks obtained.	2m
12.	Find the mode of the marks obtained.	2m

IV

An international cricket tournament was organized. Ten teams participated in the tournament. All the players got opportunity to bat in their first match. The lowest and highest runs scored by an individual player in their first match are 0 and 99 respectively. Runs scored by the players in the first match is given below in the table: -

Runs scored by the players in the first match	Number of players
More rhan or equal to 0	110
More rhan or equal to 10	105
More rhan or equal to 20	95
More rhan or equal to 30	81
More rhan or equal to 40	69
More rhan or equal to 50	51
More rhan or equal to 60	45
More rhan or equal to 70	30
More rhan or equal to 80	20
More rhan or equal to 90	8

Based on the above information answer the following questions:



13.	How many players scored more than or equal to 50 runs?
14.	How many players scored less than 10 runs?
15.	Find the mean number of runs scored?
16.	Find the mode of the runs scored?

V

Formula one Portugese Grand Prix technical team at the Algarve International Circuit are analysing last year data of drivers' performance to provide valuable inferences to commentators on how the drivers can improve this year.



Times(in minutes)	70 - 80	80 - 90	90 - 100			
Number of drivers	4	10	14	20	24	8

The time taken by 80 drivers to complete a journey is given in the table:

Based on the above information answer the following questions:

17.	In which interval does the median of the distribution lie?	1m
18.	In which interval does the mode of the distribution lie?	1m
19.	What is the modal time taken to complete journey?	2m
20.	Find the median time taken if the mean time taken is 104.25 minutes?	2m

Answers

Answers	1	42	2	170	3	136.7g	4	133.3g
	5	10-12	6	10	7	19	8	20
	10	9	11	21.92	12	28.06	13	51
	14	5	15	50.82	16	43.3	17	100-110
	18	110-120	19	112minutes	20	106.83minutes		