WORKSHEET 14

CHAPTER 14 – STATISTICS

1. A data is such that its minimum value is 86 and range is 32, then the maximum value is
   (*a*) 43 (*b*) 118 (*c*) 180 (*d*) 160

2. Median of data 32, 15, 8, 27, 15, 12, 9 is
   (*a*) 8 (*b*) 22 (*c*) 15 (*d*) 16

3. Class mark of the class 60–70 is
   (*a*) 70 (*b*) 60 (*c*) 65 (*d*) 130

4. Median of the following numbers, 4, 4, 5, 7, 6, 7, 7, 12, 3, is
   (*a*) 4 (*b*) 5 (*c*) 6 (*d*) 7

5. If the mean of the observations x, $x + 3$, $x + 5$, $x + 7$, $x + 10$, is 9, then mean of the last three observations is
   (*a*) $11\frac{1}{3}$ (*b*) $10\frac{1}{3}$ (*c*) $14\frac{1}{3}$ (*d*) $10\frac{2}{3}$

6. The median of the data 78, 22, 56, 34, 54, 45, 39, 68, 54, 84 is
   (*a*) 45 (*b*) 54 (*c*) 49 (*d*) 48

7. A cumulative frequency distribution table is given. Convert this into a frequency distribution table.

Marks	*Number of students*
below 45	0
below 60	8
below 75	23
below 90	48

8. Find the arithmetic mean of firs ten natural numbers.

9. If the median of 6, 7, $x - 2$, x, 17 and 20 written in ascending order is 16, find the value of x.

10. 20 years ago, when my parents got married, their average age was 23 years, now the average ages of my family consisting of myself and my parents is 34 years. What is my present age?

11. Calculate the arithmetic mean of 2, 4, 6, 8, 3 and 7 and there by determine the arithmetic means of 102, 104, 106, 108, 103 and 107.

12. The daily wages paid to five workers in a factory are ₹ 20, ₹ 40, ₹ 42, ₹ 45, ₹ 30. If the wage of each worker is increased by ₹ 5, what will be the new average wage?

13. The scores of two batsmen 'A' and 'B' in 5 innings of a test series are as follows:

    A: 58, 59, 60, 65, 40

    B: 120, 80, 30, 65, 12.

    On the basis of their average scores, determine who, of the two, may be a better choice for the mean of the series.

14. Find the combined mean of a group of 150 students if the mean of 50 students is 40 and that of other 100 students is 50.

Name: ..... Teacher's signature: .....

Class: IX ..... Date: .....

15. Draw a histogram and frequency polygon for the following data:

Marks	0–20	20–40	40–60	60–80	80–100	Total
Number of students	10	15	40	45	40	150

16. Find the unknown frequency for the following distribution:

Class interval	10–20	20–30	30–40	40–50	50–60	70–80
Frequency	12	x_2	10	x_4	x_5	2
Cumulative frequency	x_1	25	x_3	43	48	50

17. Construct a frequency polygon for the given data:

Class interval	0–10	10–20	20–30	30–40	40–50
Frequency	85	40	45	25	5

18. Following is the distribution of ages (in years) of teachers working in a primary school:

Age (in years)	21–25	26–30	31–35	36–40	41–45	46–60
Number of teachers	70	110	165	320	200	135

(*a*) Determine the class limit of third class interval.

(*b*) Determine the class size.

(*c*) Determine the class marks of fifth class intervals.

(*d*) How many teachers are in the age group 26 to 45 years?

19. The following table gives the distribution of students of two sections according to marks obtained by them:

Section A		*Section B*	
Marks	*Frequency*	*Marks*	*Frequency*
0–10	3	0–10	5
10–20	9	10–20	19
20–30	17	20–30	15
30–40	12	30–40	10
40–50	9	40–50	1

Represent the marks of students of both sections on the same graph by two frequency polygons.

20. Draw histogram of the weekly pocket expenses of 125 students of a school given below:

Weekly pocket expenses (in ₹)	10–20	20–30	30–50	50–60	60–90	90–100
Number of students	10	15	40	25	30	5

ANSWERS

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1. (*b*) 118 **2.** (*c*) 15 **3.** (*c*) 65 **4.** (*c*) 6 **5.** (*a*) $11\frac{1}{3}$ **6.** (*b*) 54 **8.** 5–5

10. 17 **11.** 5, 105 **12.** ₹ 40.40 **13.** 13 **14.** 46.7

16. $x_1 = 12$, $x_2 = 13$, $x_3 = 35$, $x_4 = 8$, $x_5 = 5$

18. (*a*) 31–35 (*b*) 5 (*c*) 43 (*d*) 795