STATISTICS

MEDIAN

Q.1 Find the median of the following frequency distribution :

Marks	0-10	10-20	20-30	30-40	40-50	Total
No. of Students	8	20	36	24	12	100

Q.2 A life insurance agent found the following data for distribution of ages of 100 policy holders. Calculate the median age, if policies are given only to persons having age 18 years onwards but less than 60 years.

Age (in years)	Below 20	Below 25	Below 30	Below 35	Below 40	Below 45	Below 50	Below 55	Below 60
No. of policy holders	2	6	24	45	78	89	92	98	100

Q.3 The length of 40 leaves of a plant are measured correct to the nearest millimetre, and the data obtained is represented in the following table. Find the median length of the leaves.

Length (in mm)	118-126	127-135	136-144	145-153	154-162	163-171	172-180
No. of leaves	3	5	9	12	5	4	2

Q.4 Calculate the missing frequency 'a' from the following distribution, it is being given that the median of the distribution is 24.

Age (in years)	0-10	10-20	20-30	30-40	40-50
No. of persons	5	25	a	18	7

Q.5 The median of the following data is 525. Find the values of x and y, if the total frequency is 100.

Class Interval	Frequency (f_i)
0-100	2
100-200	5
200-300	x
300-400	12
400-500	17
500-600	20
600-700	y
700-800	9
800-900	7
900-1000	4
	N = 100

Q.6 The following data gives the information on the observed lifetimes (in hours) of 225 electrical components :

Lifetimes (in hours)	0-20	20-40	40-60	60-80	80-100	100-120
Frequency	10	35	52	61	38	29

Determine the modal lifetimes of the components.

Q.7 Given below is the frequency distribution of the heights of players in a school.

Heights (in cm)	160-162	163-165	166-168	169-171	172-174
No. of players	15	118	142	127	18

Find the average height of maximum number of players.

Q.8. Calculate the median from the following data :

Rent (in Rs.)	15-25	25-35	35-45	45-55	55-65	65-75	75-85	85-95
No. of House	8	10	15	25	40	20	15	7

Q.9 If the median of the following frequency distribution is 28.5 find the missing frequencies :

Class interval :	0-10	10-20	20-30	30-40	40-50	50-60	Total
Frequency	5	f_1	20	15	f_2	5	60

Q.10 Determine the median from the following data :

Wages (in ₹)	No. of workers	Wages (in ₹)	No. of workers
20 – 40	4	100 – 120	12
40 – 60	6	120 – 140	7
60 – 80	10	140 – 160	3
80 – 100	16		

ANSWER

1. 26.1

2. 35.76

3. 146.75 m

4. $a = 25$

5. x and y are 9 and 15

6. 65.625 hours

7. 165.5-168.5

8. 58

9. $f_1 = 8, f_2 = 7$

10. 91.25