MATHS

BOOKS - JBD PUBLICATION

STATISTICS

Example

1. Calculate mean and variance of the following data:

Class interval	0 – 20	20 – 40	40 – 60	60 – 80	80 – 100	100 – 120	120 – 140
Frequency	2	3	5	10	3	5	2

▶ **Watch Video Solution**

2. Calculate the mean, variance and standard deviation for the following distribution:

Class - interval	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50
Frequency	5	8	15	16	6

▶ **Watch Video Solution**

3. Find the mean for the following data:

Income per day	0-100	100-200	200-300	300-400	400-500	500-600	600-700	700-800
Number of persons	4	8	9	10	7	5	4	3

▶ **Watch Video Solution**

4. Find the mean and variance of the first n natural numbers.

▶ **Watch Video Solution**

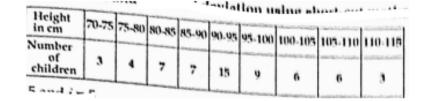**5.** Find the mean and variance for the following frequency distribution:

Classes	0-30	30-60	60-90	90-120	120-150	150-180	180-210
Frequencies	2	3	5	10	3	5	2

▶ **Watch Video Solution**

6. Find the mean, variance and standard deviation using short cut method:

Height in cm	70-75	75-80	80-85	85-90	90-95	95-100	100-105	105-110	110-115
Number of children	3	4	7	7	15	9	6	6	3

7. The mean and standard deviation of 20 observations are found to be 10 and 2 respectively. On rechecking, it was found that an observation 8 was incorrect. Calculate the correct mean and standard deviation if wrong item is omitted.

8. The mean and standard deviation of 20 observations are found to be 10 and 2 respectively. On rechecking, it was found that an observation 8 was incorrect. Calculate the correct mean and standard deviations in each of the following cases:

If it is replaced by 12.

9. The mean and variance of 8 observation are 9 and 9.25 respectively. If six of the observations are 6, 7, 10, 12, 12 and 13, find the remaining two observations.

10. The mean and standard deviation of a group of 100 observations were found to be 20 and 3 respectively. Later on it was found that three observations were incorrect, which were recorded as 21, 21 and 18. Find the mean and standard deviation if the incorrect observations were omitted.

11. The sum and sum of squares corresponding to length x (in cm) and weight y (in plant products are given below:

$$\sum_{i=1}^{50} x_i = 212, \ \sum_{i=1}^{50} x_i^2 = 902.8, \ \sum_{i=1}^{50} y_i = 261, \ \sum_{i=1}^{50} y_i^2 = 1457.6$$

Which is more varying, the lengths or weight?