MATHS

BOOKS - MODERN PUBLICATION

STATISTICS

Example

1. Find the range of the series :

75, 85, 95, 105, 115, 125.

Watch Video Solution

2. Find the range of the series :

15, 18, 13, 16, 14, 13, 14, 19, 21.

Watch Video Solution

3. Find the mean deviation from the mean for following the data 4, 7, 8, 9, 10, 12, 13, 17.

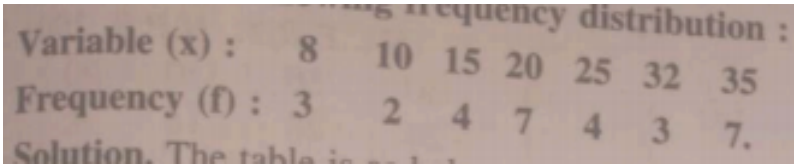
Watch Video Solution

4. Find the mean deviation from the mean for the following data : 12,3,18,17,4,9,17, 19, 20, 15, 8, 17, 2, 3, 16, 11,3,1,0,5 .

Watch Video Solution

Watch Video Solution

5. Calculate the mean deviation from mean for the following frequency distribution :

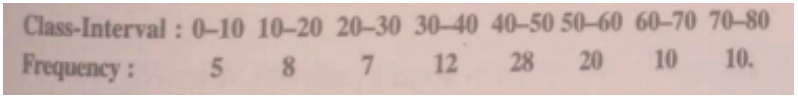


Variable (x) :	8	10	15	20	25	32	35
Frequency (f) :	3	2	4	7	4	3	7.

Solution. The table is ...

Watch Video Solution

6. Calculate the mean, mean deviation from mean for the following data :



Class-Interval :	0–10	10–20	20–30	30–40	40–50	50–60	60–70	70–80
Frequency :	5	8	7	12	28	20	10	10.

Watch Video Solution

7. If $\bar{x}$ is the mean and Mean Deviation from mean is $MD(\bar{x})$, then find the number of observations lying between $\bar{x} - MD(\bar{x})$ and $\bar{x} + MD(\bar{x})$ from the following data : 22, 24, 30, 27, 29, 31, 25, 28, 41, 42.

Watch Video Solution

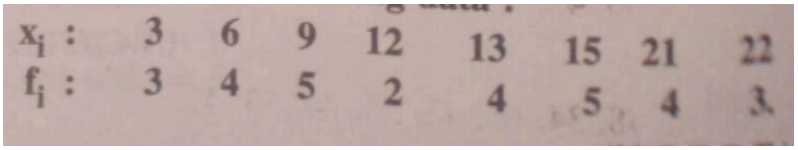
8. Find the mean deviation from the median for the following data : 3, 9, 5, 3, 12, 10, 18, 4, 7, 19, 21.

Watch Video Solution

9. The scores of a batsman in ten innings are : 55, 34, 48, 38, 70, 44, 54, 46, 63, 42. Find the mean deviation about the median.

Watch Video Solution

10. Find the mean deviation from the median for the following data:



x_i :	3	6	9	12	13	15	21	22
f_i :	3	4	5	2	4	5	4	3

Watch Video Solution

11. Calculate the mean deviation about median for the following data :

Class :	0–10	10–20	20–30	30–40	40–50	50–60
Frequency :	6	7	15	16	4	2.

Watch Video Solution

12. Find the variance of the following data : 6, 8, 10, 12, 14, 16, 18, 20, 22, 24.

Watch Video Solution

13. Find the variance and standard deviation for the following data :

x_i :	4	8	11	17	20	24	32
f_i :	3	5	9	5	4	3	1.

Watch Video Solution

14. Calculate the mean and the standard deviation for the following distribution:

Marks :	20–30	30–40	40–50	50–60	60–70	70–80	80–90
No. of students :	3	6	13	15	14	5	4.

Watch Video Solution

15. Calculate the Mean and the Standard Deviation for the following data:

Wages upto Rs :	15	30	45	60	75	90	105	120
No. of workers :	12	30	65	107	157	202	222	230.

Watch Video Solution

16. Find the Standard Deviation of the following data :

Class-Interval :	25–35	35–45	45–55	55–65	65–75
Frequency :	21	20	16	25	18.

Watch Video Solution

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

Class :	30 – 40	40 – 50	50 – 60	60 – 70	70 – 80	80 – 90	90 – 100
Frequency:	3	7	12	15	8	3	2.

Watch Video Solution

18. The measurements (in m.m.) of the diameters of the heads of 107 screws are as given below :

Diameter in (m.m.) :	33–35	36–38	39–41	42–44	45–47
No. of screws :	17	19	23	21	27.

Calculate the standard deviation.

Watch Video Solution

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

Watch Video Solution

20. The mean and standard deviation of 100 observations were calculated as 40 and 5.1 respectively by a student who took by mistake 50 instead of 40 for one observation. What are the correct mean and standard deviation ?

Watch Video Solution

21. The variance of 20 observations is 5. If each observation is multiplied by 2, find the new variance of the resulting observations.

Watch Video Solution

22. The means and standard deviations of heights and weights of 50 students of a class are as follows :

	Weights	Heights
Mean	63·2 kg	63·2 inch
Standard deviation	5·6 kg	11·5 inch.

Which shows more variability, heights or weights ?

Watch Video Solution

23. Coefficient of variation of two distributions are 60% and 70% and their standard deviations are 21 and 16 respectively. What are their arithmetic means?

Watch Video Solution

24. Calculate coefficient of variation for the following data :

Income (in Rs.) :	1000 – 1700	1700 – 2400	2400 – 3100	3100 – 3800
No. of families :	12	18	20	25
Income (in Rs.) :	3800 – 4500	4500 – 5200		
No. of families :	35	10.		

Watch Video Solution

Exercise

1. Find the mean deviation from the mean for the following data : 6,7,10,12,13,4,8,12.

Watch Video Solution

2. Find the mean deviation from the mean for the following data : 6.5,5, 5.25, 5.5,4.75,4.5,6.25,7.75,8.5.

Watch Video Solution

3. Find the mean deviation from the mean for the following data : 13, 15, 16, 15, 18, 15, 14, 18, 17, 10 .

Watch Video Solution

4. Find the mean deviation from the mean for the following data. 38, 70, 48, 40, 42, 55, 63, 46, 54, 44.

Watch Video Solution

Watch Video Solution

5. Find the mean deviation from the mean for the following data : 36, 72, 46, 42, 60, 45, 53, 46, 51, 49.

Watch Video Solution

6. Find the mean deviation from the mean for the following data : 37, 48, 50, 23, 47, 58, 29, 27, 31, 40.

Watch Video Solution

7. Find the mean deviation from the mean for the following data : 13, 15, 16, 15, 18, 15, 14, 18, 17, 10 .

Watch Video Solution

8. Find the mean deviation from the mean for the following data :

x_i :	5	10	15	20	25
f_i :	7	4	6	3	5

Watch Video Solution

9. Find the mean deviation from the mean for the following data :

x_i :	10	30	50	70	90
f_i :	4	24	28	16	8.

Watch Video Solution

10. Find the mean deviation from the mean for the following data :

x_i :	3	5	7	9	11	13
f_i :	2	7	10	9	5	1

Watch Video Solution

11. Find the mean deviation from the mean for the following data :

x_i :	2	5	6	8	10	12
f_i :	2	8	10	7	8	5

Watch Video Solution

12. Find the mean deviation from the mean for the following data :

x_i :	5	7	9	10	12	15
f_i :	8	6	2	2	2	6.

Watch Video Solution

13. Find the mean deviation from the mean for the following data :

Classes :	10–20	20–30	30–40	40–50	50–60	60–70	70–80
Frequencies :	2	3	8	14	8	3	2.

Watch Video Solution

14. Find the mean deviation from the mean for the following data :

Height (cm) :	95–105	105–115	115–125	125–135	135–145	145–155
No. of Boys :	9	13	26	30	12	10.

Watch Video Solution

15. Find the mean deviation from 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
No. of persons :	4	8	9	10	7	5	4	3.

Watch Video Solution

16. If $\bar{x}$ is the mean and Mean Deviation from mean is $MD(\bar{x})$, then find the number of observations lying between $\bar{x} - MD(\bar{x})$ and $\bar{x} + MD(\bar{x})$ from the following data : 22, 24, 30, 27, 29, 31, 25, 28, 41, 42.

Watch Video Solution

17. If $\bar{x}$ is the mean and Mean Deviation from mean is $MD(\bar{x})$, then find the number of observations lying between $\bar{x} - MD(\bar{x})$ and $\bar{x} + MD(\bar{x})$ from the following data : 22, 24, 30, 27, 29, 31, 25, 28, 41, 42.

Watch Video Solution

18. Find the mean deviation from the median for the following data : 9, 12, 18, 3, 5, 3, 10, 12, 21, 12, 21.

Watch Video Solution

19. Find the mean deviation from the median for the following data : 10, 3, 12, 5, 9, 3, 18, 21, 21, 8, 12, 12.

Watch Video Solution

20. Find the mean deviation from the median for the following data : 13,17, 16, 14, 11, 13, 10, 16, 11, 18, 12, 17.

Watch Video Solution

21. Find the mean deviation from the mean for the following data : 36, 72, 46, 42, 60, 45, 53, 46, 51, 49.

Watch Video Solution

22. Find the mean deviation from the median for the following data : 38,70,48,34, 65, 42, 55, 44, 53, 47.

Watch Video Solution

23. Find the mean deviation from the median for the following data :

x_i :	15	21	27	30	35
f_i :	3	5	6	7	8.

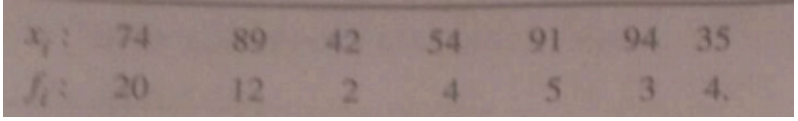
Watch Video Solution

24. Find the mean deviation from the median for the following data :

x_i :	5	7	9	10	12	15
f_i :	8	6	2	2	2	6.

Watch Video Solution

25. Find the mean deviation from the median for the following data :



x_i :	74	89	42	54	91	94	35
f_i :	20	12	2	4	5	3	4.

Watch Video Solution

26. The lengths (in cm.) of 10 rods in a shop are as below : 42.0,52.3,55.2,72.9,52.8,79.0,32.5,15.2,27.9,30.2 . Find M.D. (Med.).

Watch Video Solution

27. The lengths (in cm.) of 10 rods in a shop are as below : 42.0,52.3,55.2,72.9,52.8,79.0,32.5,15.2,27.9,30.2 . Find M.D. (Med.).

Watch Video Solution

28. Calculate the mean deviation about median age for the age distribution of 100 persons given below :

Age	:	16—20	21—25	26—30	31—35	36—40	41—45	46—50	51—55
Number	:	5	6	12	14	26	12	16	9.

Watch Video Solution

29. Find the mean deviation about the median for the following data :

Marks	:	0—10	10—20	20—30	30—40	40—50	50—60
Number of girls	:	6	8	14	16	4	2

Watch Video Solution

30. Find the mean deviation about the median 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

31. Find the mean deviation about the median for the following data :

Height (in cm.)	95—105	105—115	115—125	125—135	135—145	145—155
Number of boys	9	13	26	30	12	10.

Watch Video Solution

32. Given that $\bar{x}$ is the mean and σ^2 is the variance of n observations $x_1, x_2, \ldots x_n$. Prove that the mean and

variance of the observations $ax_1, ax_2, \ldots, ax_n$, are $a\bar{x}$ and $a^2\sigma^2$ respectively $(a \neq 0)$.

Watch Video Solution

33. Prove that identity :

$$\sum_{i=1}^{n}(x_i - \bar{x})^2 = \sum_{i=1}^{n} x_i^2 - n\bar{x}^2 = \sum_{i=1}^{n} x_i^2 - \frac{\left(\sum_{i=1}^{n} x_i\right)^2}{n}$$

.

Watch Video Solution

34. Find the mean and variance for the following data :

2, 4,5, 6, 8, 17.

Watch Video Solution

Watch Video Solution

35. Find the mean and variance for the following data:

6, 7, 10, 12, 13, 4, 8, 12.

Watch Video Solution

36. Find the mean and variance for the following data:

first n natural numbers.

Watch Video Solution

37. Find the mean and variance for the following data :

First 10 multiples of 3.

Watch Video Solution

38. Find the variance and standard deviation for the following data :

65, 58, 68, 44, 48, 45, 60, 62, 60, 50.

Watch Video Solution

39. The scores of batsman A were : 48, 80, 58, 44, 52, 65, 73, 56, 64, 54. Find the variance.

Watch Video Solution

40. The scores of batsman A were : 28, 60, 38, 24, 32, 45, 53, 36, 44, 34. Find the variance.

Watch Video Solution

41. Find the Standard Deviation of the following data :

x_i	:	3	8	13	18	23
f_i	:	7	10	15	10	6.

Watch Video Solution

42. Find the mean and standard deviation for the following data :

x_i	:	6	10	14	18	24	28	30
f_i	:	2	4	7	12	8	4	3

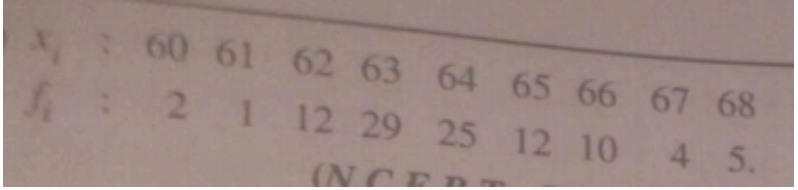
Watch Video Solution

43. Find the mean and standard deviation for the following data :

x_i	:	92	93	97	98	102	104	109
f_i	:	3	2	3	2	6	3	3

Watch Video Solution

44. Find the mean and standard deviation for the following data :



Watch Video Solution

45. The scores of 10 students in a test, in which the maximum marks Were 50 as follows : 28, 36, 34, 28, 48, 22, 35, 27, 19, 41. Find the Variance.

Watch Video Solution

46. Later on the maximum marks were increased to 100, and accordingly each Student's score was doubled. Find the variance of the new scores .

Watch Video Solution

47. The scores of 48 children in an intelligence test are shown in the following :

Score :	71	76	79	83	86	89	92	97	101	103	107	110	114
Frequency:	4	3	4	5	6	5	4	4	3	3	3	2	2.

Calculate the variance σ^2 and find out the percentage of children whose scores lie between $\bar{x} - \sigma$ and $\bar{x} + \sigma$.

Watch Video Solution

48. A sample of 25 variates has mean 40 and standand deviation 5 and a second sample of 35 variates has mean 45 and the standard deviation 2. Find the mean

and standard deviation of the two samples of variates, taken together.

Watch Video Solution

49. The mean of 5 observation is 4.4 and their variance is 8.24. If three of the observations are 1,2 and 6, find the other two observations

Watch Video Solution

50. The mean and variance of 7 observations are 8 and 16 respectively. If five observations are 2, 4, 10, 12, 14, find the remaining two observations.

Watch Video Solution

51. The mean and standard deviation of 6 observations are 8 and 4, respectively. If each observation is multiplied by 3, find the new mean and new standard deviation of the resulting observations.

Watch Video Solution

52. Calculate the standard deviation of the following frequency distribution :

Class-Interval :	0–10	10–20	20–30	30–40	40–50	50–60	60–70	70–80
Frequency :	5	8	7	12	28	20	10	10

Watch Video Solution

53. Calculate the standard deviation of the following frequency distribution :

Marks	:	20–30	30–40	40–50	50–60	60–70	70–80	80–90
No. of Students	:	3	6	13	15	14	5	4.

Watch Video Solution

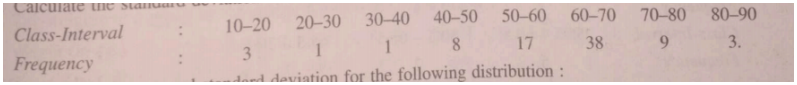
54. Following is the distribution of the number of out-door patients registered in a certain hospital in 100 days :

No. of patients	:	101–150	151–200	201–250	251–300	301–350	351–400	401–450
No. of days	:	7	10	47	72	25	11	8.

Find the arithmetic mean and standard deviation.

Watch Video Solution

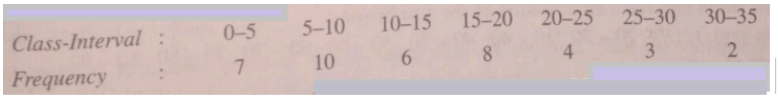
55. Calculate the standard deviation of the following distribution :



Class-Interval	:	10–20	20–30	30–40	40–50	50–60	60–70	70–80	80–90
Frequency	:	3	1	1	8	17	38	9	3.

Watch Video Solution

56. Calculate the mean and standard deviation for the following distribution :



Class-Interval	:	0–5	5–10	10–15	15–20	20–25	25–30	30–35
Frequency	:	7	10	6	8	4	3	2

Watch Video Solution

57. Calculate the mean and standard deviation for the following distribution :

Class-Interval :	0–4	4–8	8–12	12–16	16–20	20–24	24–28	28–32
Frequency :	2	5	8	16	14	10	8	3

Watch Video Solution

58. Calculate the mean and standard deviation for the following distribution :

Class-Interval :	5–15	15–25	25–35	35–45	45–55	55–65	65–75	75–85
Frequency :	15	15	23	22	25	10	5	10

Watch Video Solution

59. Calculate the mean and standard deviation for the following distribution :

Class-Interval :	30–40	40–50	50–60	60–70	70–80	80–90	90–100
Frequency :	3	7	12	15	8	3	2

(H.P.B. 2011, 10, 09)

Watch Video Solution

60. Calculate the mean and standard deviation for the following distribution :

Class-Interval :	8–10	10–12	12–14	14–16	16–18	18–20	20–22
Frequency :	8	10	18	30	12	10	2

Watch Video Solution

61. Calculate the mean and standard deviation for the following distribution :

Class-Interval :	31–35	36–40	41–45	46–50	51–55	56–60	61–65	66–70
Frequency :	2	3	8	12	16	5	2	2.

Watch Video Solution

62. In a study of patients, following data are obtained. Find the arithmetic mean and the standard deviation of the, data :

Age (in years) :	10–19	20–29	30–39	40–49	50–59	60–69	70–79	80–89
No. of cases :	1	0	1	10	17	38	9	3.

Watch Video Solution

63. Calculate the mean and variance of the following data :

Classes	:	0–10	10–20	20–30	30–40	40–50
Frequencies	:	5	8	15	16	6

Watch Video Solution

64. Calculate the mean and variance of the following data :

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

65. Calculate the mean and variance of the following data :

Classes	:	0–5	5–10	10–15	15–20	20–25	25–30	30–35	35–40	40–45
Frequencies	:	20	24	32	28	20	11	26	15	24.

Watch Video Solution

66. Calculate the mean and variance of the following distribution :

Class-Interval	:	20–30	30–40	40–50	50–60	60–70	70–80	80–90
Frequency	:	3	61	132	153	140	51	2.

Watch Video Solution

67. Calculate the mean and standard deviation of the distribution :

Class-Interval :	0–10	10–20	20–30	30–40	40–50	50–60
Frequency :	15	17	19	27	19	12

Watch Video Solution

68. Calculate the mean and standard deviation of the distribution :

Class-Interval :	10–20	20–30	30–40	40–50	50–60	60–70	70–80	80–90	90–100
Frequency :	3	4	7	7	15	9	6	6	3

Watch Video Solution

69. Calculate the mean and standard deviation of the distribution :

Class-Interval :	10–25	25–40	40–55	55–70	70–85	85–100
Frequency :	6	20	44	26	3	1

Watch Video Solution

70. Calculate the mean and standard deviation of the distribution :

Class-Interval :	20–40	40–60	60–80	80–100	100–120	120–140	140–160	160–180	180–200
Frequency :	6	9	11	14	20	15	10	8	7

Watch Video Solution

71. Calculate the mean and standard deviation of the distribution :

Class-Interval :	30·5 – 35·5	35·5 – 40·5	40·5 – 45·5	45·5 – 50·5	50·5 – 55·5
Frequency :	2	3	8	12	16
Class-Interval :	55·5 – 60·5	60·5 – 65·5	65·5 – 70·5		
Frequency :	5	2	2.		

Watch Video Solution

72. Calculate the mean and standard deviation of the distribution :

Age (in years) :	20 – 30	30 – 40	40 – 50	50 – 60	60 – 70	70 – 80	80 – 90
Number of Members :	3	61	132	153	140	51	2

Watch Video Solution

73. Calculate the mean and standard deviation of the distribution :

Marks	:	5 – 10	10 – 15	15 – 20	20 – 25	25 – 30	30 – 35	35 – 40	40 – 45
No. of Students	:	5	6	15	10	5	4	2	2.

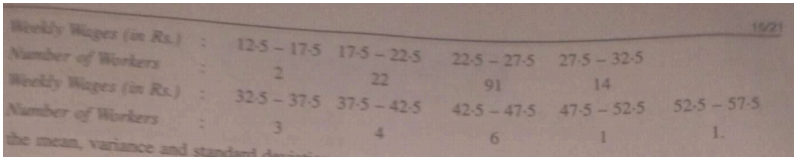
Watch Video Solution

74. Calculate the mean and standard deviation of the following distribution :

Weekly Wages (in Rs.)	:	20 – 40	40 – 60	60 – 80	80 – 100	100 – 120	120 – 140
Number of Workers	:	8	12	20	30	40	35
Weekly Wages (in Rs.)	:	140 – 160	160 – 180	180 – 200			
Number of Workers	:	18	7	5			

Watch Video Solution

75. Calculate the mean and standard deviation of the following distribution :

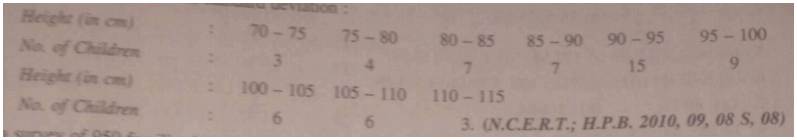


Weekly Wages (in Rs.)	:	12·5 – 17·5	17·5 – 22·5	22·5 – 27·5	27·5 – 32·5	
Number of Workers	:	2	22	91	14	
Weekly Wages (in Rs.)	:	32·5 – 37·5	37·5 – 42·5	42·5 – 47·5	47·5 – 52·5	52·5 – 57·5
Number of Workers	:	3	4	6	1	1.

the mean, variance and standard

Watch Video Solution

76. Find the mean , variance and standard deviation :



Height (in cm)	:	70 – 75	75 – 80	80 – 85	85 – 90	90 – 95	95 – 100
No. of Children	:	3	4	7	7	15	9
Height (in cm)	:	100 – 105	105 – 110	110 – 115			
No. of Children	:	6	6	3. *(N.C.E.R.T.; H.P.B. 2010, 09, 08 S, 08)*			

Watch Video Solution

77. In a survey of 950 families in a village, the following distribution of children was obtained :

No. of Children:	0 – 2	2 – 4	4 – 6	6 – 8	8 – 10	10 – 12
No. of Families :	272	328	205	125	15	10.

Find the mean and standard deviation of the distribution.

Watch Video Solution

78. The diameters of circles (in mm) drawn in a design are given below :

Diameter (in mm)	:	33 – 36	37 – 40	41 – 44	45 – 48	49 – 52
No. of circles	:	15	17	21	22	25.

Calculate the standard deviation and mean diameter of the circles.

Watch Video Solution

79. From the data given below, state which group is more variable :

Classes	:	10 – 20	20 – 30	30 – 40	40 – 50	50 – 60	60 – 70	70 – 80
Group A (Freq.)		9	17	32	23	40	18	1
Group B (Freq.)		18	22	40	18	32	8	2.

Watch Video Solution

80. In a study to test the effectiveness of new variety of seeds, an experiment was performed with 50 experimental fields and the following results were obtained :

Yield Per hectare (in Quintals)	:	31 – 35	36 – 40	41 – 45	46 – 50	51 – 55	56 – 60	61 – 65	66 – 70
No. of Fields	:	2	3	8	12	16	5	2	2.

Find the variance and standard deviation.

Watch Video Solution

81. The weights of a group of children at 6 month are given below:

Weight (in kg.)	:	5 – 6	6 – 7	7 – 8	8 – 9	9 – 10	10 – 11
Frequency	:	8	20	12	6	3	1.

Find the standard deviation.

Watch Video Solution

82. In the study of 79 diabetic patients, the following data are obtained. Find the variance and the standard deviation without finding the average (i.e. using

deviation method).

Age at Detection (in years)	No. of cases	Age at Detection (in years)	No. of cases
10 – 19	1	50 – 59	17
20 – 29	0	60 – 69	38
30 – 39	1	70 – 79	9
40 – 49	10	80 – 89	3.

Watch Video Solution

83. Two plants A and B of a factory show following results about the number of workers and the wages paid to them :

	A	B
No. of Workers	5000	6000
Average monthly wages	Rs. 2500	Rs. 2500
Varinace of distribution of wages	81	100

In which

plant, A or B, is there greater variability in individual wages ?

Watch Video Solution

84. The following values are calculated in respect of heights and weights of the students of a section of class XI.

		Height	Weight
Mean	:	162·6 cm	52·36 kg
Variance	:	127·69 cm^2	23·136 kg^2.

Can we say that the weights show greater variation than the heights?

Watch Video Solution

85. 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?

Watch Video Solution

86. From the data given below, state which group is more variable, A or B ?

Marks	:	10 – 20	20 – 30	30 – 40	40 – 50	50 – 60	60 – 70	70 – 80
Group A	:	9	17	32	33	40	10	9
Group B	:	10	20	30	25	43	15	7

Watch Video Solution

87. From the prices of shares X and Y below, find out which is more stable in value :

X	:	35	54	52	53	56	58	52	50	51	49
Y	:	108	107	105	105	106	107	104	103	104	101.

Watch Video Solution

88. The following is the record of goals scored by team A in a football session.

No. of goals scored	:	0	1	2	3	4
No. of matches	:	1	9	7	5	3.

For the team B, mean number of goals scored per match was 2 with a standard deviation 1.25 goals. Find which team may be considered more consistent ?

Watch Video Solution

89. The mean of first 11 terms of Fibonacci sequence : 1,1,2, 3, 5, 8, 13, 21, 34, 55, 89 is 21.1. Calculate the standard deviation.

Watch Video Solution

90. If each of the observations $x_1, x_2, \ldots . x_n$ is increased by an amount 'a', where 'a' is a negative or positive number, show that the variance remains unchanged.

Watch Video Solution

91. Find the mean and standard deviation for the following data :

Age (in years) :	25–30	30–35	35–40	40–45	45–50	50–55.
No. of teachers :	30	23	20	14	10	3.

Watch Video Solution

92. Find the average earnings (using step-deviation method) and the standard deviation of the group of

432 workers from the data given ahead:

Monthly Wages (in Rs.)	No. of Workers	Monthly Wages (in Rs.)	No. of Workers
80—100	18	200—220	68
100—120	30	220—240	36
120—140	20	240—260	27
140—160	40	260—280	21
160—180	90	280—300	12
180—200	70		

Watch Video Solution

93. The yields of wheat for 50 experimental fields are given below. Find the average yield and hence find its

variance.

Yield per Hectare (in quintals)	No. of fields	Yield per Hectare (in quintals)	No. of fields
31—35	2	51—55	16
36—40	3	56—60	5
41—45	8	61—65	2
46—50	12	66—70	2

Watch Video Solution

94. The mean and standard deviation of marks obtained by 50 students of a class in three subjects- Mathematics, Physics and Chemistry are given below :

Subject	Mathematics	Physics	Chemistry
Mean	42	32	49·9
Standard deviation	12	15	20.

Which of

the three subjects shows the highest variability in marks and which shows the lowest ?

Watch Video Solution

95. From a frequency distribution consisting of 18 observations, the mean and the standard deviation were found to be 7 and 4 respectively. But on comparison with the original data, it was found that a figure 12 was miscopied as 21 in calculations. Calculate the correct mean and standard deviation.

Watch Video Solution

96. 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.

Watch Video Solution

97. 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.

Watch Video Solution

98. 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.

Watch Video Solution