MATHS

BOOKS - MAXIMUM PUBLICATION

STATISTICS

Example

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1. Find the mean deviation about the mean for

the following data:

4,7,8,9,10,12,13,17.

2. Find the mean deviation about the mean for the following data:

38,70,48,40,42,55,63,46,54,44.

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

13,17,16,14,11,13,10,16,11,18,12,17.

4. Find the mean deviation about the median

for the following data:

36,72,46,42,60,45,53,46,51,49

5. The mean and standard deviation of marks

obtained by 50 students of a class in three

subjects , mathematics ,Physics and Chemistry

are given below :

Which of the three subject shows the highest variability in marks and which shows the lowest?

Subject	mathematics	Physics	Chemistry
Mean	42	32	40.9
Standard deviation	12	15	20

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6. Find the mean deviation about the mean for the following data:

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

7. Find the mean deviation about the mean for the following data:

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

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

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

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

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

10. Find the mean deviation about 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 person	4	8	9	10	7	5	4	3

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

Height	95-105	105-115	115-125	125-135	135-145	145-155
Number of Boys	9	13	26	30	12	10

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12. 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

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

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

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14. Find the variance and standard deviation of 3,4,6,5,5,3,8,1,7,5 .

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15. Find the variance and standarddeviation of

x_i	2	4	6	8	10	12	14	16
f_i	4	4	5	15	8	5	4	5

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16. An analysis of monthly wages paid to

workers in two firms A and B ,belonging to the

same industry,gives the following result

Which firm A and B pays larger amount as

monthly wages?

No. of wage earners	586	648
Mean of monthly wages	Rs. 5253	Rs. 5253
variance	100	121

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17. An analysis of monthly wages paid to workers in two firms A and B ,belonging to the same industry,gives the following result Which firm A or B , shows greater variability in

individual wages?

No. of wage earners	586	648
Mean of monthly wages	Rs. 5253	Rs. 5253
variance	100	121

18. The sum and squares corresponding to length x(in cm) and y(in gm) of 50 plant products are given below:

$$\sum_{i=1}^{50} x_i = 212, \quad \sum_{i=1}^{50} x_i^2 = 902.8$$

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

which is more varying , the length or weight?

19. Find the variance and standard deviation of

:

Marks	20-30	30-40	40-50	50-60	60-70	70-80	80-90
number of students	3	6	13	15	14	5	4

20. Consider the numbers 4,7,8,9,10,12,13,17

Find the mean of the numbers.

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21. Consider the number 4,7,8,9,10,12,13,17

Find the mean deviation about the mean.

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22. Consider the numbers 4,7,8,9,10,12,13,17

Find the standard deviation.

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23. Consider the following data :

35,49,30,32,50,41,34,45,36

Find its median.

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24. Consider the folowing data :

35,49,30,32,50,41,34,45,37

Find its mean deviation about median.

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25. The mean and standard deviation of marks obtained by 50 students in a class in two subjects , mathematics and accountancy are given below :

Which of the subject shows the highest

variability in marks? and why?

Subject	Mathematics	Accountancy
Mean	42	32
Standard deviation	12	15

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26. a public Opinion polling agency surveyed 200 government employees . The following table shows the ages of the employees interviewed:

Calculate the mean age of the employees

interview.

Age	21-25	26-30	31-35	36-40	41-45	46-50	51-55
Number	20	30	40	50	30	20	10

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27. a public Opinion polling agency surveyed 200 government employees . The following table shows the ages of the employees interviewed:

Compute the mean deviation of the ages

about the mean age.

Age	21-25	26-30	31-35	36-40	41-45	46-50	51-55
Number	20	30	40	50	30	20	10

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28. Consider the following frequency table.

Find the mean.

x	33	38	43	48	53	58	63	68
f	2	3	8	12	16	5	2	2

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29. Consider the following frequency table.

Find the mean deviation about mean.

x	33	38	43	48	53	58	63	68
f	2	3	8	12	16	5	2	2

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30. Consider the following data in respect of marks of 50 students in mathematics and physics.

Find coefficient of variation of mathematics

and physics.

	Mathematics	Physics
Mean	45	40
Variance	9	4

31. Consider the following data in respect of

marks of 50 students in mathematics and

physics.

Which subject shows more variability?

	Mathematics	Physics
Mean	45	40
Variance	9	4

32. Consider the following data in respect of

marks of 50 students in mathematics and

physics.

Which subject shows more consistent?

	Mathematics	Physics
Mean	45	40
Variance	9	4

33. Find the standard deviation for the folowing data :

x	3	8	13	18	23
f	7	10	15	10	6

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34. Consider the frequency distribution

Find the mean

Marks	0-10	10-20	20-30	30-40	40-50
Freq-uency	5	8	15	16	6

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35. Consider the frequency distribution

Calculate the variance and the standard deviation.

Marks	0-10	10-20	20-30	30-40	40-50
Freq-uency	5	8	15	16	6

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36. Consider the frequency distribution

Find the mean

x_i	8	11	17	20	25	30	35
f_i	2	3	4	1	5	7	3

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37. Consider the frequency distribution

Calculate the variance and the standard deviation.

x_i	8	11	17	20	25	30	35
f_i	2	3	4	1	5	7	3

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38. Consider the following frequency table:

find the mean

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

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39. Consider the following frequency table:

find the mean deviation about the mean

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

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40. Find the standard deviation for the data :

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

41. The scores of two batsman A and B in 5 innings during a certain match are as follows :

Find mean score of each batsman

A	10	15	80	70	25
B	8	9	7	10	6

42. The scores of two batsman A and B in 5 innings during a certain match are as follows :

Find Standard deviation of the score of each batsman.

A	10	15	80	70	25
B	8	9	7	10	6

43. The scores of two batsman A and B in 5 innings during a certain match are as follows : Find Which of the batsman is more consistant?

A	10	15	80	70	25
B	8	9	7	10	6

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

Score	300-400	400-500	500-600	600-700	700-800	800-900	900-1000
Freq-uency	3	7	12	15	8	3	2

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45. Calculate the median and mean deviation about median for the following data.

Class	0-10	10-20	20-30	30-40	40-50	50-60
Freq-uency	6	7	15	16	4	2

46. Consider the following distribution:

Calculate the mean of the distribution

Class	10-20	20-30	30-40	40-50	50-60
Freq-uency	6	15	13	7	9

47. Consider the following distribution:

Calculate the standard deviation of the

distribution.

Class	10-20	20-30	30-40	40-50	50-60
Frequency	6	15	13	7	9

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48. Consider the following distribution:

Find the mean

Marks	0-10	10-20	20-30	30-40	40-50
Frequency	5	8	15	16	6

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49. Consider the following distribution:

Find the standard deviation

Marks	0-10	10-20	20-30	30-40	40-50
Freq-uency	5	8	15	16	6

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50. Consider the following distribution:

find the coefficient of variation of marks.

Marks	0-10	10-20	20-30	30-40	40-50
Freq-uency	5	8	15	16	6

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51. Consider the frequency distribution:

find the mean

x_i	30-40	40-50	50-60	60-70	70-80	80-90	90-100
f_i	3	7	12	15	8	3	2

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52. Consider the frequency distribution:

Calculate the variance and standard deviation.

x_i	30-40	40-50	50-60	60-70	70-80	80-90	90-100
f_i	3	7	12	15	8	3	2

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53. If $\bar{x}$ is the mean and σ is the standard deviation of a distribution , then the coefficient of variation is ....a)$\bar{x} / \sigma$ x100 b)$\sigma/\bar{x}$ c)$\sigma/\bar{x}$ x100 d)$\sigma/\bar{x}$ x50

A. $\dfrac{\bar{x}}{\sigma} \times 100$

B. $\dfrac{\sigma}{\bar{x}}$

C. $\dfrac{\sigma}{\bar{x}} \times 100$

D. $\dfrac{\sigma}{\bar{x}} \times 50$

Answer: C

54. Find the standard deviation for the following data

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

55. The sum of all the deviations of the observations of a data from its A.M is.........

a)zero   b)maximum   c)minimum   d)negative number

A. Zero

B. Maximum

C. Minimum

D. Negative number

Answer: A

56. Calculate the mean variance and standard deviation of the following frequency distribution.

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

57. Suppose the mean of certain number of observation is 50 and the sum of all the

observation is 450. Write down the number of observations.

58. Find the mean deviation about mean for the following data:

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

59. If the variance of a certain distribution is 8, write its standard deviation.

60. Find the mean ,standard deviation and coefficient of variation for the following frequency distribution .

Marks	0-10	10-20	20-30	30-40	40-50
Freq-uency	5	8	15	16	6

61. Find the variance for the observations 2,4,6,8, and 10 .

62. Consider the frequency distribution

Find the mean

x	5	10	15	20	25
f	7	4	6	3	5

63. Consider the frequency distribution

Find the mean deviation about the mean.

x	5	10	15	20	25
f	7	4	6	3	5

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