

CLASS – XI (STATISTICS)

ASSIGNMENT (**BASIC**) - 1

SECTION – A (One mark Questions)

- If γ is the variance and σ is the standard deviation , then
 (a) $\gamma = \frac{1}{\sigma^2}$ (b) $\gamma = \frac{1}{\sigma}$ (c) $\gamma = \sigma^2$ (d) $\gamma^2 = \sigma$
- The mean deviation of the numbers 3,4,5,6,7 from the mean is
 (a) 25 (b) 5 (c) 1.2 (d) 0
- The variance of a given data is 24 ,If each data is increased by 5 , the new variance becomes
 (a) 29 (b) 24 (c) 19 (d) 0
- The S.D of a set of observations is 8 and if each observation is divided by -2 , the S.D of the new set of observations will be
 (a) -4 (b) -8 (c) 8 (d) 4
- The mean of n – data’s is 10 ,if each data is increased by 4 , then new mean is -----
- The variance of a given data is 16 ,If each data is multiplied by 5 , the new variance will be -----
- If co-efficient of variation of distribution is 75 and standard deviation is 2% , the mean is -----
- The S.D of the data’s a ,b ,c ,d ,e ,f ,g & h is m, If each data decreased by k , the new S. D will be -----
- Coefficient of variation = $\frac{\text{-----}}{\text{Mean}} \times 100$
- If \bar{X} is the mean of n values of x , then $\sum_{i=1}^n (x_i - \bar{X})$ is always equal to -----
- If two data’s A and B have same mean 25 each and their standard deviations are 4.5 and 6.7 respectively. Which data A or B is more variable.
- If the variance of he data is 121 , what will be the standard deviation.

SECTION – B (Two - marks Questions)

- Find out the variance of 2,4,6,8,10,12 ?

14. Subject	Mathematics	Physics
Mean	42	32
St. Deviation	12	15

Which of the two subjects shows the highest variability in marks and which shows the lowest.

- Find the mean deviation from the median of first seven natural numbers.
- Find the mean deviation from the mean of first five odd numbers.
- Find the mean and variance of 11 , 13 ,15 , 17, 19

SECTION – C (Four - marks Questions)

- Find the mean deviation about the mean for the following data:

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

- 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

- Find the mean deviation about the mean for the following data:

Size	20	21	22	23	24
Frequency	6	4	5	1	4

- Find the mean deviation about the median for the following data:

Size	10	11	12	14	15
Frequency	2	3	8	3	4

22. The following is the record of goals scored by team A in 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 ?

SECTION – D (Six - marks Questions)

23. Calculate the mean deviation about mean of the following data :

Class	0 - 4	4 - 8	8 - 12	12 -16	16- 20
Frequency	4	6	8	5	2

24. Calculate the mean deviation about median of the following data :

Marks	0-10	10-20	20 -30	30 -40	40-50	50 - 60
No. of Girls	6	8	14	16	4	2

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

26. Calculate the mean deviation about median of the following data :

Class	16 - 20	21 - 25	26 -30	31 -35	36-40	41 - 45	46 -50	51 - 55
Frequency	5	6	12	14	26	12	16	9

27. Calculate the mean deviation about mean of the following data :

Class	0 - 100	100 – 200	200 - 300	300 - 400	400 - 500	500-600	600-700	700-800
Frequency	4	8	9	10	7	5	4	3

28. Calculate the mean deviation about median of the following data :

Marks	0-10	10-20	20 -30	30 -40	40-50
No. of Girls	5	10	20	5	10

29. Calculate mean and variance for the following frequency distribution:

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

30. Find the standard deviation for the following data :

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

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