

- Mean deviation of 6, 8, 12, 15, 10, 9 through mean is
 (1) 10 (2) 2.33
 (3) 2.5 (4) none of these.
- A data consists of n observations: x_1, x_2, \dots, x_n . If $\sum_{i=1}^n (x_i + 1)^2 = 11n$ and $\sum_{i=1}^n (x_i - 1)^2 = 7n$, then the variance of this data is
 (1) 5 (2) 8
 (3) 6 (4) 7
- A sample of 20 observations has mean of 50 and variance of 1, while a sample of 40 observations has mean of 50 and standard deviation 2. The 2 samples are combined to give complete set of 60 observations with variance σ^2 , then $3\sigma^2$ is equal to
- The marks of some students were listed out of 75. The SD of marks was found to be 9. Subsequently the marks were raised to a maximum of 100 and variance of new marks was calculated. The new variance is,
 (1) 144 (2) 122
 (3) 81 (4) None of these
- Suppose a population A has 100 observations 101, 102, \dots , 200, and another population B has 100 observations 151, 152, \dots , 250. If V_A and V_B represent the variances of the two populations, respectively, then $\frac{V_A}{V_B}$ is
 (1) 1 (2) $\frac{9}{4}$
 (3) $\frac{4}{9}$ (4) $\frac{2}{3}$
- The median of a set of 2021 distinct observations is 20.19. If each of the largest 40 observations of the set is increased by 2, then median of the new set
 (1) is increased by 2 (2) is increased by 80
 (3) remains 20.19 (4) data insufficient
- The mean and variance of 20 observations are found to be 10 and 4 respectively. On rechecking, it was found that an observation 8 is incorrect. If the wrong observation is omitted, then the correct variance is
 (1) 7 (2) $\frac{100}{19}$
 (3) $\frac{1400}{361}$ (4) $\frac{1440}{361}$
- Consider three observations a, b and c such that $b = a + c$. If the standard deviation of $a + 2, c + 2$ is d , then which of the following is true?
 (1) $b^2 = 3(a^2 + c^2) + 9d^2$ (2) $b^2 = a^2 + c^2 + 3d^2$
 (3) $b^2 = 3(a^2 + c^2 + d^2)$ (4) $b^2 = 3(a^2 + c^2) - 9d^2$
- Let in a series of $2n$ observations, half of them are equal to a and remaining half are equal to $-a$. Also by adding a constant b in each of these observations, the mean and standard deviation of new set become 5 and 20, respectively. Then the value of $a^2 + b^2$ is equal to :
 (1) 425 (2) 650
 (3) 250 (4) 925
- The assumed mean and sum of the deviations for a set of 100 observations is given as 4 and -11 cm respectively. And the sum of the squares of these deviations is 257 cm². Then the coefficient of variation is:
 (1) 41.13% (2) 40.13%
 (3) 42.13% (4) None of these.