

Answer on Question #73864 – Math – Statistics and Probability

Question

The mean and standard deviation of set of 100 observations were worked out as 40 and 5 respectively by a computer who by mistake to the value of 50 in place of 40 for one observation. Recalculate the correct mean and variance.

Solution

Firstly, we get that $40 \times 100 = 4000$, after that we change 50 to 40, hence the correct sum should be $4000 - 50 + 40 = 3990$. The correct mean is $3990/100 = 39.9$. The variance won't change because the sample size is the same and a shift won't affect the variance.