



Finding the Average of Standard Deviations

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Application Note: 3

1. Average of Standard Deviations

It is not mathematically correct to add standard deviations. In order to do so, convert the standard deviations to variances by squaring the standard deviations; these can be added by using a pooled standard deviation, by taking the root sum of squares as in the formula:

$$S_{TOTAL} = \sqrt{s_1^2 + s_2^2 + s_3^2 \dots s_n^2}$$

Where, s_1^2 is the square of the standard deviation for data set1 and s_1^2 is the square of the standard deviation for data set etc.

To find the mean of the standard deviations, where n is the total number of standard deviations.

$$S_{mean} = \frac{S_{TOTAL}}{n}$$

2. How to cite this application note

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