

Re: Difference b/w Standard Deviation and Variance

Source: <http://sci.tech-archive.net/Archive/sci.stat.math/2006-08/msg00471.html>

- *From:* "Reef Fish" <Large_Nassau_GrOuper@xxxxxxxxx>
 - *Date:* 12 Aug 2006 05:53:20 -0700
-

"Luis A. Afonso" wrote:

As USUAL Reef Fish Bob is wrong.

At least Afonso is trying to talk statistics when he made his error this time.

It's the same error he has been making in the term "sample variance" and "population variance".

Same error. Had been thoroughly debunked by others already.

-- Reef Fish Bob.

The SAMPLE VARIANCE of a N sized sample: x_1, x_2, \dots, x_N is

____sample variance =
= Sum squared deviations from the mean divided by N = $\sum_{i=1}^N (x_i - \hat{x})^2 / N$

__the SAMPLE STANDARD DEVIATION is its squared root.

The Bob's confusion is that
IF I WANT, based on the sample items, to have an UNBIASED ESTIMATION of the POPULATION VARIANCE we must divide the sum of the squared deviations not by N but by N-1.

Note:

This is what ALL text-books say about. However, an insignificant number of authors chose to define ABUSIVELY the sample variance using N-1.

I REPEAT: ABUSIVELY.

(see , for example Wikipedia).

Re: Difference b/w Standard Deviation and Variance

_____licas (Luis A. Afonso)