STDEV

STDEV returns the standard deviation of a set of values

Syntax

1. STDEV(Pno%, Ndim%, "ColLab$_1",.., "ColLab$_Ndim%")
2. STDEV(0, Npoints%, x_1, y_1, x_2, y_2,...)
3. STDEV(@ObjFn(..), Ndim%, @ObjColPar_1,.., @ObjColPar_Ndim%)
4. STDEV(Telitab$, Ndim%, "ColLab$_1",.., "ColLab$_Ndim%")

Arguments

- Pno% is the number that refers to the TeLiTab sets in the Data slot. Pno% should be an integer value or a parameter which is assigned an integer value and is the number of theTeLiTab set in the expressions' data slot.
- Npoints% is the number of points (x,y) that are given in direct definition.
- @ObjFn() refers to the Object from which data will be used.
- TeLiTab$ refers to the string parameter that contains the TeLiTab.
- Ndim% is the number of dimensions (or columns in the table...).
- "ColLab$_1" and @ObjColPar_1 etc refer to the columns that will be used;

Remarks

1. See also Telitab access for a generic description on the use of TeLiTab data
2. Similar to other Data analysis functions, the STDEV is a convenient way to evaluate data. Please also look at these functions for syntax examples
3. For a multi-dimensional dataset the STDEV will be determined over all columns.
4. The standard deviation is calculated using the "nonbiased" or "n-1" method.
5. STDEV uses the following formula:

   SQRT(n*Sigma_X^2 - (Sigma_X)^2/(n*(n-1)))

Examples

Suppose 10 engine parts made by the same machine during a production run are collected as a random sample and measured for breaking strength. S TDEV estimates the standard deviation of breaking strengths for all the parts. The sample values are provided in the STDEV function as follows:

```
SET$=
0
1 "Strength"
"1"  1465
"2"  1421
"3"  1457
"4"  1428
"5"  1416
"6"  1477
"7"  1422
"8"  1452
"9"  1412
"10" 1409
```

STDEV(SET$, 1, "Strength") returns 24.52

Quick links: Functions overview | Attribute overview | Constants overview | Dimensions overview

Copyright © 2022, MARIN