

POL

POL returns the value based on a polynome for which the coefficients are given by a dataset

Syntax

1. POL(Pno%, Ndim%, "ColLab\$_1", ..., "ColLab\$_Ndim%", Xint_1,...,Xint_Ndim%-1)
2. POL(@ObjFn(...), Ndim%, @ObjColPar_1,..., @ObjColPar_Ndim%, Xint_1,...,Xint_Ndim%-1)
3. POL(Telitab\$, Ndim%, "ColLab\$_1", ..., "ColLab\$_Ndim%", Xint_1,...,Xint_Ndim%-1)

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 the [TeLiTab](#) 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
- **Xint** is the parameter to use for calculation, this can also be an expression.

Remarks

1. See also Telitab access for a generic description on the use of [TeLiTab](#) data
2. See Data analysis functions for related functions. Please also look at these functions for syntax examples
3. Study the example below for the correct format of the dataset with polynomial coefficients.
4. [Quaestor](#) is able to generate polynomial representations of solutions you have created in the knowledge based system. This can be done by means of the *Make Polynome* option in the [Workbase](#). The result will be a recipe you can directly use in the knowledge base. With this functionality you are able to create simple relations on the basis of series of complex parametric variations you have previously carried out. Please note the functionality has its limits. It will only work within tables with calculated values.

Examples

The expression:

POL(1, 4, "Mult", "PA", "PB", "PC", A, B, C)

with the following information in the Data slot:

```
|POL1| 0
4 "Mult" "PA" "PB" "PC"
"1" 0.3 1 3 2
"2" 0.8 3 2 4|
```

means:

$0.3 \cdot A \cdot B^3 \cdot C^2 + 0.8 \cdot A^3 \cdot B^2 \cdot B^4$

The number of power coefficients equals the number of arguments (n) in the call.

Each case of m cases in the Telitab set represents:

multiplicator, power_expression_1,...,power_expression_n)

in which $n \geq 1$ and $m \geq 1$. N is the number of sets, only limited by memory size and practical considerations. The leader |POL1| means: polynomial function POL, 1 for number of expression, more than one polynomial can be used in a single expression. It is also possible to include data in the form of a file reference in the Data slot.

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