

FORMULA SYNTAX

Normal Syntax

$$a^{s/4x}$$

abaCal Syntax

$$a^{**}(s/(4*x))$$

The order of operations is expressed in the following chart:

1. **exponents** and **roots**
2. **multiplication** and **division**
3. **addition** and **subtraction**

It's necessary to write every operator like:

$$P = C(1 + r/n)^{nt} \text{ (normal Syntax)}$$

$$P = C * (1 + r/n)^{(n * t)} \text{ (abaCal Syntax)}$$

Expressions

Mathematical operations

Addition	+
Subtraction	-
Multiplication	*
Exponentiation	** or ^
Equality	=
Division	/
Right parenthesis)
Left parenthesis	(

Logical operations

IF condition	IF
ELSE condition	ELSE
END of IF condition	ENDIF
Intersection condition	AND
Union condition	OR
Imbrication of conditions) and (
Greater than	>
Greater or equal	>=
Less than	<
Less or equal	<=
Equal to	=
Not equal	!=

Functions

Functions

Minimum of a and b	MIN(a,b)
Maximum of a and b	MAX(a,b)
Absolute value of a	ABS(a)
Exponential e ^a	EXP(a)
Logarithm of a with basis 10	LOG(a)
LN (Natural Logarithm of a)	LN(a)
Rounded a with b decimals	RND(a,b)
Sine(α), α in degree or radian	SIN(a)

Functions cont.

Cosine(α), α in degree or radian	COS(a)
Tangent(α), α in degree or radian	TAN(a)
Arcus Sine of x	ASIN(x)
Arcus Cosine of x	ACOS(x)
Arcus Tangent of x	ATAN(x)
Square root of a	SQRT(a)
Entire value of a	ENT(a)
Stops the calculation of the formula	EXIT

Call of another formula or rule

CALL("F",A)

Calls the formula F (F is a name of a formula in your personal library) and returns result A from formula F. As A you can put every resultfield contained in formula F. (See Tutorial)

Summation

With the SUM Function you can add the results of a calculation for a defined amount of times. For example, if you want to sum the result of two times three for six times your formula would look like this.

$$SUM(ind, 1,6)\{2 * 3\}$$

The syntax looks like this.

$$SUM(< index >, < start val >, < end val >)\{exp\}$$

Iteration

With the FOR Function you can define a loop inside your formula. If you want to know the square numbers you can do it with a FOR function like this.

$$FOR(ind, 1,10)\{Q(ind) = ind ** 2\}$$

Multi-indexes tables

Access to multi-indexes tables

TAB(TableName)

TAB(TableName,A1,A2,A3,A4,A5,A6,A7,A8,A9,A10)

Components

Name of the table	TableName
Expressions	A1, A2, ...,A10
These are values of the indexes of the table. Those indexes are optional. If they're not defined, the system will take the value of the index at this moment of the calculation.	