SmartCalc Documentation.

SmartCalc is an application that allows you to calculate some mathematical expressions.

This calculator has two sections:

1. Default. This calculator is able to calculate mathematical expressions and, if necessary, graph functions in two dimensions.
2. Credit. The loan calculator is able to calculate the loan with the interest rate, term, loan amount and loan type. As a result, you will get the monthly repayment amount for the loan (if the loan type is differentiated, then the first and the last payment), the overpayment amount and the total repayment amount.

Let's take a closer look at each of them.

I. Default calculator.

To calculate an expression, write it on the input line, then press equals. There is no tick in the graph box.

Calculate a mathematical expression at a specific variable value. You need an expression with the variable 'x' and set the value in the appropriate window.

The graph flag must be set to graph.

II. Credit calculator.

To calculate the loan, you need to set the interest rate, term, loan amount and type.

The following restrictions apply:

a. The input string for a mathematical expression is no longer than 255 characters.
b. The maximum value for the abscissa and ordinate axis is 1000000.
c. The minimum value for plotting is equal to the maximum value, taken with a minus sign.
d. Only the mathematical transformations shown in Table 1 are available.
e. The loan amount cannot be more than 100 million.
f. Maximum loan term: 60 years.
g. The interest rate is 100%. Minimum - 0.01%

Table 1

Operation	
Brackets	(a + b)
Addition	a + b
Subtraction	a - b
Multiplication	a * b
Division	a / b
Power	a ^ b
Modulus	a mod b

Unary plus	+a
Unary minus	-a
Function	
Computes cosine	cos(x)
Computes sine	sin(x)
Computes tangent	tan(x)
Computes arc cosine	acos(x)
Computes arc sine	asin(x)
Computes arc tangent	atan(x)
Computes square root	sqrt(x)
Computes natural logarithm	ln(x)
Computes common logarithm	ln(x)