***SmartCalc Documents***

***SmartCalc*** is an application for performing operations on numbers or algebraic formulas.

The calculator consists of two sections:

1. Default value. The calculator calculates mathematical expressions . If necessary, the calculator can also plot functions in two dimensions.
2. Credit. The loan calculator calculates the loan taking into account the loan amount, loan type, interest rate and term. As a result, you will receive a monthly

the loan repayment amount (if the loan type is differentiated, then the first and last

payment), the total amount of repayment and the amount of overpayment.

Let's take a closer look at each of the two sections.

I. Default calculator.

To calculate an expression, write it in the input line and press equal. There is no check mark in the graphic field.

To calculate a mathematical expression for a certain value of a variable, you need an expression with the variable 'x' and set the value in the corresponding window.

The graph flag must be set in graph.

II. Credit calculator.

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

The following restrictions apply:

1. The loan amount cannot exceed 100 million.
2. Maximum loan term: 60 years.
3. The length of the input string for a mathematical expression must not exceed 255 characters.
4. The maximum value for the abscissa and ordinate axes is 1000000.
5. The minimum value for plotting is equal to the maximum value taken with the sign minus.
6. Only the mathematical transformations shown in Table 1 are available.
7. The interest rate is 100%. Minimum - 0.01%

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| 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 ) |