

One-Argument Math Functions

The RLM-11C calculator provides a complete set of single argument functions commonly found in any scientific calculator. Each time one of this functions is applied the following actions are performed:

- The function use the displayed number (stack-X) as the argument.
- The displayed number in stack-X is replaced with the result of the function.
- The original value in stack-X (argument of the function) is stored in the Last-X.
- The Stack is set to lift if a new number is entered.
- Values in stacks Y, Z, and T registers are not affected.

Following is a description and examples of all of the one-argument functions. For convenience and easy reading, the functions are grouped in different categories.

General Functions

Keys	Description
$[\sqrt{x}]$	Calculates the square root of the number in the stack-X.
$[g] [x^2]$	Calculates the square of the number in the stack-X.
$[1/x]$	Calculates the reciprocal of the number in the stack-X.
$[f] [x!]$	Calculates the factorial or gamma function of the number in the stack-X.

Examples (assumes FIX mode with 4 decimals)

Operation	Keystrokes	Display (stack-X)	Last-X
1 / 0.23	“0.23” $[1/X]$	4.3478	0.2300
1.41 ²	“1.41” $[g] [x^2]$	1.9881	1.4100
$\sqrt{2}$	“2” $[\sqrt{x}]$	1.4142	2.0000
$\Gamma(\pi)$	$[f] [\pi]$ “1” $[-] [f] [x!]$	2.2880	2.1416

Logarithmic Functions

Keys	Description
[e^x]	Calculates the natural anti-logarithm of the number in the stack-X.
[g] [LN]	Calculates the natural logarithm of the number in the stack-X.
[10^x]	Calculates the common anti-logarithm of the number in the stack-X.
[g] [LOG]	Calculates the common logarithm of the number in the stack-X.

Examples (assumes FIX mode with 4 decimals)

Operation	Keystrokes	Display (stack-X)	Last-X
ALn(0.23)	“0.23” [e^x]	1.2586	0.2300
Ln(4.5)	“4.5” [g] [LN]	1.5041	4.5000
ALog(-0.4)	“0.4” [CHS] [10^x]	0.3981	-0.4000
Log(3.545)	“3.545” [g] [LOG]	0.5496	3.5450

Trigonometric Functions

Keys	Description
[SIN]	Calculates the Sine of the number in the stack-X.
[COS]	Calculates the Cosine of the number in the stack-X.
[TAN]	Calculates the Tangent of the number in the stack-X.
[g] [SIN⁻¹]	Calculates the Inverse Sine of the number in the stack-X.
[g] [COS⁻¹]	Calculates the Inverse Cosine of the number in the stack-X.
[g] [TAN⁻¹]	Calculates the Inverse Tangent of the number in the stack-X.

Examples (assumes FIX mode with 4 decimals)

Operation	Keystrokes	Display (stack-X)	Last-X
Sin(23°)	[g][DEG] “23” [SIN]	0.3907	23.0000
Asin(-0.34)	“0.34” [CHS] [g] [SIN⁻¹]	-19.8769 (deg)	-0.3400
Cos($\pi/4$ rad)	[g][RAD] [f] [π] “4” [÷] [COS]	0.7071	0.7854
Acos(0.545)	“0.545” [g] [COS⁻¹]	0.9944 (rad)	0.5450
Tan(120 grad)	[g][GRD] “120” [TAN]	-3.0777	120.0000
Atan(2.25)	“2.25” [g] [TAN⁻¹]	73.3750 (grad)	2.2500

Hyperbolic Functions

Keys	Description
[f] [HYP] [SIN]	Calculates the Hyperbolic Sine of the number in the stack-X.
[f] [HYP] [COS]	Calculates the Hyperbolic Cosine of the number in the stack-X.
[f] [HYP] [TAN]	Calculates the Hyperbolic Tangent of the number in the stack-X.
[g] [HYP⁻¹] [SIN]	Calculates the Inverse Hyperbolic Sine of the number in the stack-X.
[g] [HYP⁻¹] [COS]	Calculates the Inverse Hyperbolic Cosine of the number in the stack-X.
[g] [HYP⁻¹] [TAN]	Calculates the Inverse Hyperbolic Tangent of the number in the stack-X.

Examples (assumes FIX mode with 4 decimals)

Operation	Keystrokes	Display (stack-X)	Last-X
Sinh(2.3)	“2.3” [f] [HYP] [SIN]	4.9370	2.3000
Cosh(2.3)	“2.3” [f] [HYP] [COS]	5.0372	2.3000
Tanh(2.3)	“2.3” [f] [HYP] [TAN]	0.9801	2.3000
Asinh(0.5)	“0.5” [g] [HYP⁻¹] [SIN]	0.4812	0.5000
Acosh(1.5)	“1.5” [g] [HYP⁻¹] [COS]	0.9624	1.5000
Atanh(0.5)	“0.5” [g] [HYP⁻¹] [TAN]	0.5493	0.5000

Conversion Functions

Keys	Description
[f] [→H.MS]	Converts fractional hours in stack-X to Hour-Minutes-Second format showing in the display the result in the 'H.MMSSdd' form.
[g] [→H]	Convert the stack-X number from 'H.MMSSdd' form to fractional hours.
[f] [→RAD]	Convert the stack-X value from Degrees to Radians.
[g] [→DEG]	Convert the stack-X value from Radians to Degrees.

Examples (assumes FIX mode with 4 decimals)

Operation	Keystrokes	Display (stack-X)	Last-X
12.5125 to H:M:S	“12.5125” [f] [→H.MS]	12.3045	12.5125
12:30:45 to Hour	“12.3045” [g] [→H]	12.5125	12.3045
$\pi/4$ rad to deg	[f] [π] “4” [÷] [g] [→DEG]	45.0000	0.7854
33.3 deg to rad	“33.3” [f] [→RAD]	0.5812	33.3

Number Alteration Functions

Keys	Description
[g][ABS]	Calculates the absolute value of the number in the stack-X.
[g] [INT]	Calculates the integer part of the number in the stack-X.
[f] [FRAC]	Calculates the fractional part of the number in the stack-X.
[g] [RND]	Rounds the number in the stack-X to the current number of decimals.

Examples (assumes FIX mode with 4 decimals)

Operation	Keystrokes	Display (stack-X)	Last-X
ABS(-4.13)	“4.13” [CHS] [g][ABS]	4.1300	-4.1300
INT(π)	[f] [π] [g] [INT] [f] [PREFIX]	3.00 3000000000	3.1416
FRAC(π)	[f] [π] [f] [FRAC] [f] [PREFIX]	0.1416 1415926536	3.1416
RND(π)	[f] [π] [g] [RND] [f] [PREFIX]	3.1416 3141600000	3.1416