NAME
function_plotter.lua – function plotter for Lua-AKFAvatar

SYNOPSIS
function_plotter.lua [ function ]

DESCRIPTION
Function plotter for Lua-AKFAvatar. You can enter a function for the variable \( x \), which will then be plotted. For example, enter something like this: "\((x/5)^3\)"

You can use the following operators:

+ plus (addition)
- minus (subtraction)
* multiply (multiplication)
/ divide (division)
^ exponentiation (for example use "\(x^3\) for \(x^3\))
% modulo (the rest of a division)

For fractions you can use either a point or a comma as decimal mark. So "0.5" or "0,5" is the same. You cannot use a thousands separator. The number \( \pi \) can be written as "pi".

You can use the following functions:

\( \text{sqrt}(x) \)  square root (\( \sqrt{x} \))
\( \text{exp}(x) \)  \( e^x \)
\( \text{log}(x) \)  natural logarithm
\( \text{log10}(x) \)  base-10 logarithm
\( \text{deg}(x) \)  convert to degree (\( x \) in radians)
\( \text{rad}(x) \)  covert to radians (\( x \) in degree)
\( \text{sin}(x) \)  sine (\( x \) in radians)
\( \text{sinh}(x) \)  hyperbolic sine (\( x \) in radians)
\( \text{asin}(x) \)  arc sine (\( x \) in radians)
\( \text{cos}(x) \)  cosine (\( x \) in radians)
\( \text{cosh}(x) \)  hyperbolic cosine (\( x \) in radians)
\( \text{acos}(x) \)  arc cosine (\( x \) in radians)
\( \text{tan}(x) \)  tangent (\( x \) in radians)
\( \text{tanh}(x) \)  hyperbolic tangent (\( x \) in radians)
\( \text{atan}(x) \)  arc tangent (\( x \) in radians)

ATTENTION: The argument for these functions must always be put in parentheses!

If you often need special functions or constant, it’s easy to add them to the script.