## Simple example

## Justus Sagemüller

## April 11, 2013

## 1 Hello

This is a simple example using the HATEX library and some math stuff.

$$4^{\left(2^3\right)^2} - 10000 \cdot 10000 \cdot (10000 \cdot 10000) \cdot (10000 \cdot 10000 \cdot 10000)$$

is 340282366910938463463374607431768211456.

For x = 19 and  $\tau = 2 \cdot \pi$ ,

$$2 + 7 \cdot (6 - \tau) - e^{5 - \sqrt{x^2 + \frac{4}{\pi}}}$$

is approximately  $1.7702 \cdot 10^{-2}$ .

$$\arcsin(\sin(\arccos(\cos(\arctan(\tan 0))))))$$

is 0,

$$\operatorname{arcsinh}\left(\sinh\left(\operatorname{arccosh}\left(\frac{\cosh\left(\operatorname{arctanh}\left(\tanh\ 0\right)\right)}{2}\right)\right)\right)$$

is not.(Test passed.)

A simple equations chain:

$$10^{18} = 10^9 \cdot 10^9$$

$$= 10^{3^2} \cdot 10^5 \cdot 10^4$$

$$= 1000000000000000000000$$

(Test passed.)

Another equations chain, this time using floats:

reads, as evaluated expressions,

$$1 \cdot 10^{-18} = 1 \cdot 10^{-18}$$
$$= 1 \cdot 10^{-18}$$
$$= 1 \cdot 10^{-18}$$

(Test passed.)