

When -2^2 does not equal -2^2

John Kane*

May 15, 2017

Table 1: Squaring a negative number and raising a negative number to a second power: A comparison of results across several software packages.

Program	-2^2	Result	-2^{2^3}	Result
Calc	-2^2	4	-2^2^3	64
Excel	-2^2	4	-2^2^3	64
Gnumeric ¹	-2^2	4	-2^2^3	256
Perl	-2^{**2}	4	$-2^{**2^{**3}}$	256
Octave	-2^2	-4	$-2^{**2^{**3}}$	-64
Python	-2^{**2}	-4	$-2^{**2^{**3}}$	-256
R	-2^2	-4	-2^2^3	-256
Matlab	-2^2	-4	-2^2^3	-64
Sage	-2^{**2}	-4	$-2^{**2^{**3}}$	-256

¹ In Gnumeric if one enters $= -2^2$ in a cell, Gnumeric automatically converts the equation to $=(-2)^2$. Similarly, $=-2^2^3$ gives $=(-2)^{(2^3)}$

*jrkrudeau@gmail.com