

# Re: On the multiplication of negative numbers

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On Jul 27, 11:18 pm, Uncle Ben <[b...@xxxxxxxxxxxxx](mailto:b...@xxxxxxxxxxxxx)> wrote:

which shows that  $(-1)*(-1) = 1$ . Ta-dah!

As a gift, we get  $\text{sq.rt.}(1) = -1$ , Of course we already knew that  $1*1=1$ , so we have discovered by this simple and obvious means that numbers can have two different square roots.

You lost some information in the above series of equations. A  $\text{SQRT}(1) = 1$ . If you'd like to obtain an result  $-1$  from squaring 1, you must add that lost information yet again. Aka  $e*\text{SQRT}((a*a))$  where  $e = a \gg 63$  (for signed 64 bit integers). A multiplication is defined as  $a = b*c$ .  $a = \text{SQRT}(b)$  contains only one element, thus it can't be bijective without correction factor.

The ambiguity is not a fault of the function, it's rather fault of mathematicians. (They are accustomed to certain traditions, and are SOOOOOOOOO last century.)

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