

Re: Relativity and delusion

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- *From:* "Spaceman" <spaceman@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx>
 - *Date:* Sun, 27 Jul 2008 12:20:15 -0400
-

Darwin123 wrote:

on Wed, 23
Jul 2008
17:06:41
-0400
<fd2dncxb0pr3ABrVnZ2dnUVZ_srin...@xxxxxxxxxxxxx>:

Dirk
Van
de
moortel
wrote:

No,
I
don't
think
so
either
-
there
will
always
be
a
steady
fresh
supply
of
retiring
engineers
and
highshool
dropouts
who
learned
to
handle

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a
square
root.

The high school dropout won't have learned about the complex plane. The operations of multiplication for negative and imaginary numbers have a perfectly reasonable picture, involving the rotation of complex vectors.

Dirk,
What
is
the
square
root
of
-1?
How
about
-4?
Negative
numbers
can't
have
square
roots
huh?

I understand the definition of imaginary.

1) Most words have more than one definition. The use of the word is determined by the context as interpreted by the people in the discussion. When scientists are discussing an "imaginary number," they are not using the definition of imaginary as something that doesn't correspond to anything in the physical world. They are using a series of definitions and operators defined. Go to any high school math book for a definition of imaginary numbers.

2) Imaginary numbers are well defined on the complex plane, which is quite larger than a number line. The complex plane is every bit as "real" as a number line. Multiplication in the complex plane includes rotation. A physical picture of the multiplication operation, as defined on the complex plane, is available which may satisfy even you. Multiplying two complex numbers includes rotation by the sum of their phase angles.

3) The complex plane includes the entire number line, including the negative numbers. On the complex plane, the product of two negative numbers is a positive number. Multiplying two negative numbers

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corresponds to adding their phase numbers, each 180 degrees. 180 degrees plus 180 degrees = 360 degrees, which on the complex plane corresponds to the direction of the positive number line.

Driving along a negative direction, I spin around 180, then I spin around 180 again.

Guess what, I am still driving in the negative direction.

It seems you "somehow got an extra 180 in there".

:)

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