

Re: complex numbers

Source: <http://sci.tech-archive.net/Archive/sci.physics.relativity/2005-06/msg01628.html>

- *From:* The TimeLord <mathnphysics-not@xxxxxxxxxxxxx>
 - *Date:* Tue, 14 Jun 2005 20:36:03 -0500
-

Dirk Van de moortel <dirkvandemoortel@xx> wrote in <[VZfre.119624\\$ia5.6770755@xx](mailto:VZfre.119624$ia5.6770755@xx)> on Monday 13 June 2005 08:36 posted to sci.physics.relativity:

>
> "N:dlzc D:aol T:com (dlzc)" <N: dlzc1 D:cox T:net@xxxxxxxxxxxxx> wrote in
> message [news:uLfre.7177\\$7s.91@xxxxxxxxxxxxx](mailto:news:uLfre.7177$7s.91@xxxxxxxxxxxxx)
>> Dear jem:
>>
>> "jem" <xxx@xxxxxxx> wrote in message
>> [news:FVere.91014\\$y6.84187@xxxxxxxxxxxxx](mailto:news:FVere.91014$y6.84187@xxxxxxxxxxxxx)
>>> The TimeLord wrote:
>> ...
>>> You can see that unless you keep straight just what
>>> the square root is defined to be,
>>>
>>> Sqrt() is defined to be a function so e.g. Sqrt(1) = 1,
>>> not +-1, and of course $i^2 = -1$, not +-1.
>>
>> sqrt() may be defined by programming languages to be "the
>> positive square root", allowing the programmer to assign whatever
>> sign(s) the programmer chooses. But the result of the square
>> root is bivalued
>
> Well, point me to *one* single technical or engineering
> publication or text in the world where they have an equation
> where they mean anything other than 3 when they write sqrt(9),
> and you are in business.
> sqrt is the positive root of a positive number.

The guy was asking about math, not engineering or tech stuff.

>
>> (except for sqrt(0)). sqrt(-1) is the
>> conundrum, i^2 is the solution.
>
> There is no such thing as sqrt(-1).
> sqrt(-1) is for bad eneclopedias.

Definition:

$\text{Sqrt}[-1] = i$

>

>> And note that $+/-i$ *is* a

>> solution, and valid result.

>

> Bot i and $-i$ are things that give -1 when squared. You can

> safely forget everything else.

I don't know how safe it is to forget everything else. It's better to take some care and get the correct answer than to rush to error like I did in my first response (the conjugate issue), right?

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// The TimeLord says:

// Pogo 2.0 = We have met the aliens and they are us!

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• *Follow-Ups:*

◆ *Re: complex numbers*

◇ *From:* David Evens

◆ *Re: complex numbers*

◇ *From:* Dirk Van de moortel

• *References:*

◆ *complex numbers*

◇ *From:* Don Giovanni

◆ *Re: complex numbers*

◇ *From:* The TimeLord

◆ *Re: complex numbers*

◇ *From:* jem

◆ *Re: complex numbers*

◇ *From:* N:dlzc D:aol T:com \((dlzc\)

◆ *Re: complex numbers*

◇ *From:* Dirk Van de moortel

• Prev by Date: *Re: Are Unified Field Theories Justified?*

• Next by Date: *Re: complex numbers*

• Previous by thread: *Re: complex numbers*

• Next by thread: *Re: complex numbers*

• Index(es):

◆ *Date*

◆ *Thread*