Re: JSH: A simple error

Source: http://sci.tech−archive.net/Archive/sci.math/2007−05/msg05371.html

---

- *From*: jstevh@xxxxxxxxx
- *Date*: 30 May 2007 20:38:27 −0700

On May 28, 9:34 am, marcus_b <marcus_bruck...@xxxxxxxxx> wrote:

> On May 27, 8:45 am, jst...@xxxxxxxxx wrote:
>
>> Posters in attacking my proofs showing inconsistency with the ring of algebraic integers routinely move outside the ring. Here is a post meant to show you how they do it.
>>
>> In the ring of integers, consider x^2 + 3x + 2 = 0, which of course factors as
>>
>> x^2 + 3x + 2 = (x+2)(x+1)
>>
>> and now solve for it using the quadratic formula, but kind of weird by NOT resolving the square root then
>>
>> x = (−3 +/− sqrt(1))/2
>>
>> and now make the substitution, x=2y, so you get
>>
>> 4y^2 + 6y + 2 = 0, so you can divide by 2 to get

$2y^2 + 3y + 1 = 0$,

and your solution now becomes

$y = (-3 +/- \text{sqrt}(1))/4$

which is two solutions where one is not an integer.

So you moved outside the ring of integers.

So what's the trick?

Well, with integer solutions you can resolve the square root and throw away one solution, which is what most people routinely do, so they say that sqrt(4) = 2.

When you do not resolve the square root−−or cannot when it is non−rational−−then you cannot throw away the other solution, so it gets dragged along, and if you do what posters typically do in replies against my research, and blanket divide a variable like x above so that you divide MORE THAN ONE SOLUTION you end up pushed out of the
ring of algebraic integers.

When I've pressed them on the reality that the sqrt() returns more than one value, posters have replied with derision noting that mathematicians have DEFINED it to have one value, so that they can continue their trick unabated, as if it were a legitimate criticism against my research.

But as I've noted repeatedly, the ring of algebraic integers is inconsistent, and you cannot prove that is is from within the ring!

> It is too weak as a ring, to allow you to prove that certain results are not within it, so posters are forced to go outside the ring to try and make their objections.
>
> As a reminder, the updated paper−−I had to clear out some errors noted by Rick Decker−−is linked to at my Extreme Mathematics group:
>
> http://groups.google.com/group/extrememathematics/web/non−polynomial−...

Seems only fair if we are going keep arguing with you to meet you halfway. So I'm looking at the paper above, and at the end of Section 3 I come to this:

(49x^2 − 7Q(x))5^2 + (−1 − 3x − 5Q(x))(5)(7) + 7^2

= 0 (mod(r + 7 + 5(1 + 7x)))

which I think is supposed to be an identity. Right? It should be true regardless of the values of r and x and Q(x). Right?

But then I see that inside the mod expression on the right there is an "r", and there is no "r" on the left. Peculiar. So maybe I should true substituting in some values for x and r and see what happens. So say x = 1 and r = 1 and Q(x) = −2.

The left side is then

(49 + 14)*25 + (−1 − 3 + 10)*35 + 49 = 1834.

The "mod" expression is

1 + 7 + 5*8 = 48.

So, is 1834 = 0 (mod(48)) ? No. 1834 = 10 (mod(48)).

Maybe you should check my arithmetic, see if I made a mistake.

I let Q(x) = −2x. Of course Q(x)*7*5^2 is added and subtracted on the left side, so it shouldn't matter at all what Q(x) is. That's not the mistake.

So I went back in your derivation a little bit. At one point you have

$r^2 + 2rs + s^2 = v^2 t^2 \pmod{r + s + vt}$,

which is fine. But then you say:

"and I can now subtract

$r^2 + rs - (2 + 2xt + tQ(x))st + s^2 = (1 + 2xs + sQ(x))t^2$"

But right here, the left side of this equation in general is not equal to the right side − you can see that with some simple substitutions also − and it's not given as a modular equation. I mean, look, there is no "r" on the right side of the equation. The two sides cannot be equal in general. So this might be the cause of the problem with the later equation.

It may be that you are saying, "I am going to assume the following equality,

$r^2 + rs - (2 + 2xt + tQ(x))st + s^2 = (1 + 2xs + sQ(x))t^2$

and subtract it from both sides of my modular tautology, and the equality just above is what I call my conditional."

But how do you justify that conditional? It certainly is not true in general.

I mean, this part of the argument looks like the following:

I start with a modular tautology in terms of variables r, s, v, and t.

I make up an equation involving the variables r, s, v, t, and x.

I subtract each side of the made−up equation from each side of the modular equality.

I end up with the equation I want.

But I still don't see how you justify the made−up equation. It looks like it just came out of thin air. Please explain.

−−

But there is I think even a bigger problem. You talk about tautological spaces and it's clear that you are trying to derive the equation

$(49x^2 + 7Q(x))5^2 - (3x + 1 + 5Q(x))(5)(7) + 7^2 = 0$

from modular tautologies. But that in itself looks like a problem to me. A modular equation is not an equation. Something like

$$(49x^2 - 7Q(x))5^2 + (-1 - 3x - 5Q(x))(5)(7) + 7^2$$

$$= 0 \ (\mathrm{mod}(r + 7 + 5(1 + 7x)))$$

does not imply that

$$(49x^2 - 7Q(x))5^2 + (-1 - 3x - 5Q(x))(5)(7) + 7^2 = 0.$$

You can't just remove the "mod" arbitrarily. But that is what you seem to be doing. Can you explain this?

I mean, 6 = 0 (mod 2) is true, but 6 = 0 is not true. You can't just throw away the "mod". You start with the tautology

$$r + s + vt = 0 \ (\mathrm{mod}(r + s + vt))$$

but it's not a tautology at all if you leave out the "mod" part − that is, you cannot conclude, for example, from your tautology that

$$r + s + vt = 0.$$

What's your explanation on this?

> One crucial addition to the paper besides error fixing is the noting that I use identities mostly, and one equation that is not an identity,

Yes − but how do you justify that equation??? Do you just declare it to be true by fiat?

> so that equation MUST drive the conditions, and it can be placed easily enough in the ring of algebraic integers.

> This result is one of the biggest in mathematical history demonstrating an actual inconsistency with a well−known mathematical object, which mathematicians have unknowingly used for over a hundred years without understanding how it can lead to false arguments that appear to be proofs when they are not.

> Readers should note that I have multiple mathematical discoveries at
> this time where all have been vigorously attacked by posters who
> clearly have a need to deny any mathematical result if they feel it
> will give credence to my research.

Sorry, I think the only discovery you can claim is your algorithm for counting primes.

> They are dogmatic in their resistance, which is part of the reason I
> call these continuing arguments against mathematical proof−−

You know, if your argument depends on an equation that you just plucked out of thin air, I don't see how it can be regarded as a proof.

> and even
> publication in a peer reviewed mathematical journal−−the Math Wars.

> I have rebutted the sci.math newsgroup which killed a mathematical
> journal with false claims, and bears a responsibility to accept
> accountability.

All kinds of assumptions are being made here. For example, the assumption that your article was peer−reviewed. If that is true, why did the editor send you a copy of an e−mail from W. Dale Hall, sent to him AFTER the article was published, claiming it was one of the peer reviews? And if it WAS one of the peer reviews, why would they have published the paper, since it said your "proof" was wrong? And how did the temporary publication of your paper lead to the death of the journal? I mean, if your paper had anything to do with it at all, it must have been that the journal was discredited because of that publication − people must have thought that that publication was a fatal mistake.

There is also the fact that you knew, before that paper was published, that it contained errors. You admitted that prior to publication. The "published" version still contains the errors that you conceded months before the paper was in the journal. You knew this, but you didn't withdraw the paper.

This was a shameful episode. Shameful for the journal and its editor, because he was completely slipshod. He told

> you an outright lie. He yanked your paper with no explanation.
> He treated you like you were an insignificant nobody. Don't
> try to blame posters here for that; the editor is to blame.
> But also, you lied. You knew your paper was wrong but you
> didn't withdraw it. Arguably you were committing fraud.
>
> Why do you keep bringing this up? It just makes you look
> bad − both mathematically incompetent and deeply dishonest.
>
> Marcus

Except you are the person being dishonest.

The original paper is readable by people wishing to check you at my Extreme Mathematics Google group, as is my latest paper which is more complete, but the original still stands well as written:

http://groups.google.com/group/extrememathematics/web/non−polynomial−factorization−paper

If my original is so wrong, why do I like referring people to it?

People in the mathematical community seem adept at lying about mathematics, I think because most people do not bother to check sources in mathematics.

But readers should note they can quietly and anonymously check the original published paper, as well as my follow−up which makes it easier to understand.

REMEMBER the lure of the problem with algebraic integers is faux proofs.

That is the draw. Ignoring the quirks of the ring of algebraic integers allows you to appear to prove things that are not true. Which is a compelling reason to hold on to it, for social status.

Those fake arguments believed to be proofs can be worth millions of dollars, and lots of jobs for people who are not really mathematicians−−if being correct is a qualifier.

James Harris

.