

## Re: Galois Theory ok, weird lie from sci.math

**Source:** <http://sci.tech-archive.net/Archive/sci.math/2004-10/4448.html>

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**From:** Will Twentyman (*wtwentyman\_at\_read.my.sig*)

**Date:** 10/15/04

Date: Fri, 15 Oct 2004 12:03:29 -0400

James Harris wrote:

> *poespam-trap@yahoo.com (Randy Poe) wrote in message news:<df76407e.0410141007.45cfa512@posting.google.com>...*

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>> *jstevh@msn.com (James Harris) wrote in message news:<3c65f87.0410140222.254aba77@posting.google.com>...*

>>

>>> *Will Twentyman <wtwentyman@read.my.sig> wrote in message news:<416dc276\$1\_3@newsfeed.slurp.net>...*

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>>>> *James Harris wrote:*

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>>>>> *So now abstract algebra is supposedly different from algebra?*

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>>>>> *Yes. Abstract algebra focuses on the properties of the set and operation(s) as a whole. Standard algebra is focused on manipulations of elements/variables within the set. The result is a completely different focus, and a corresponding different emphasis. The manipulations you do are generally not that important in abstract algebra. They are "trivial computations" that have little to do with properties of the structure as a whole. As an exercise sometime, try comparing a college algebra text with an abstract algebra text. Focus just on how they discuss polynomials and rational expressions.*

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>>>> *But is abstract algebra still algebra?*

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>>> *No. The skills and concepts taught in high-school algebra are taken for granted in abstract algebra. Abstract algebra courses are teaching different things.*

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> *So you're saying that abstract algebra is NOT algebra.*

Depending on what you mean by "algebra", abstract algebra is either \*part\* of it, or completely \*seperate\* from it.

- > *Of course, it is algebra. The problem here are a variety of vague*
- > *ideas masquerading as concrete.*
- >
- > *You have in mind "high school algebra" when the word algebra is used.*

That is how most people use the word.

- > *And you distinguish that from "abstract algebra".*
- >
- > *But algebra is algebra, and yes, abstract algebra IS algebra.*

"Algebra is algebra" is a content-free statement. To mathematicians, algebra, in its broadest sense, is a major branch of mathematics. It covers abstract algebra, linear algebra, college/high school algebra, and various other topics. I suspect that you would never try to claim that linear algebra is the same as high school algebra. In similar ways, abstract algebra is not the same as either of them.

In all of your posts, you have demonstrated solid skills with college algebra, but only the vaguest awareness of abstract algebra. The fact that you believe your college algebra manipulations are going to impact the various theorems of abstract algebra reveals how little of it you understand. The fact that you believe your "ring of objects" is a precisely defined ring reveals the same.

You seem to know what a ring, field, and group are. You don't appear to understand why various examples of these are defined the way they are. In the past, you didn't understand that the definition comes first, then the properties are analyzed, and finally the appropriate classification is assigned. I don't know if you understand that yet. Some may be defined with a particular category in mind, but that does not stop people from *\*proving\** that the set and its operations satisfy the properties.

If you feel I am being cruel, hateful, or otherwise mean to you, I'm sorry. You have admirable ambitions. What people have been telling you, whether politely or rudely or through avoidance, is that your current project is hopelessly flawed. We all understand that you disagree, but until you start learning some abstract algebra it is unlikely that you will understand why.

Simply stated: how can you accuse us of hiding from the truth, when you have done nothing to study any of it yourself?

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