

Re: Help in answering news story on refutation of fermat's last theorem

Source: <http://sci.tech-archive.net/Archive/sci.math/2005-05/msg04836.html>

- *From:* anzaures1@xxxxxxxxxxx
 - *Date:* 25 May 2005 19:37:14 -0700
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Torkel Franzen wrote:

> anzaures1@xxxxxxxxxxx writes:

>

>> When we, mathematicians, say that a statement is true in a given
>> axiomatic system, we mean that one can logically derive this statement
>> from the axioms.

> People do indeed often speak of a statement being "true in a given
> axiomatic system" when they mean that it is provable in that system.
> While mostly harmless, this terminology promotes needless confusion.
> For example, it sometimes prompts them to contradict the simple
> observation that there are theories with false axioms.

Whom "them"? Non-logician mathematicians? Name one active mathematical non-logician theory, which contains "false axioms", whatever that means. There are none. Only idiots would work on theories that contain false axioms.

In fact, there are very few axioms in mathematics. Pretty much everything is just definitions:

"A group is a set of elements with a two-to-one mapping called "multiplication" such that"

"A metric space is a set of elements with a mapping into reals such that"

"Housdorff space is a topological space such that"

etc.

In productive areas of math, all you need to know are a set of most common axioms for integers and an understanding of what is meant by terms like "set", "element", "mapping", etc. Everything else, including rationals and reals, are just definitions... No axioms.

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• **Follow-Ups:**

- ◆ **Re: Help in answering news story on refutation of fermat's last theorem**
◇ From: anzaures1
- ◆ **Re: Help in answering news story on refutation of fermat's last theorem**
◇ From: Torkel Franzen

• **References:**

- ◆ **Re: Help in answering news story on refutation of fermat's last theorem**
◇ From: Stephen J. Herschkorn
- ◆ **Re: Help in answering news story on refutation of fermat's last theorem**
◇ From: Mark Nudelman
- ◆ **Re: Help in answering news story on refutation of fermat's last theorem**
◇ From: Torkel Franzen
- ◆ **Re: Help in answering news story on refutation of fermat's last theorem**
◇ From: Mark Nudelman
- ◆ **Re: Help in answering news story on refutation of fermat's last theorem**
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- Prev by Date: **Re: Help in answering news story on refutation of fermat's last theorem**
- Next by Date: **Re: Smoothest function passing through n points**
- Previous by thread: **Re: Help in answering news story on refutation of fermat's last theorem**
- Next by thread: **Re: Help in answering news story on refutation of fermat's last theorem**
- Index(es):
 - ◆ **Date**
 - ◆ **Thread**