

Re: Explaining the foundations of math

Source: <http://sci.tech-archive.net/Archive/sci.math/2004-09/0089.html>

From: Dement (crowdog_at_o2online.de)

Date: 08/31/04

Date: Tue, 31 Aug 2004 13:19:41 +0000 (UTC)

On 31 Aug 2004, William Elliot wrote:

>From: Will Twentyman <wtwentyman@read.my.sig>

>Newsgroups: sci.math

>Subject: Re: Explaining the foundations of math

>

> >William Elliot wrote:

> >> On Mon, 30 Aug 2004, Will Twentyman wrote:

> >>>

> >>>>When I was in an honors section of Calc I in college, our professor

> >>>>made us write a paper explaining how the definition of the limit

> >>>>corresponds to the intuitive notion of a limit. Realizing that

> >>>>this class was about 50% math majors, it took most of us 3-4 tries

> >>>>before we generated a version that he considered acceptable. If

> >>>>this is a particularly difficult concept to internalize for math

> >>>>majors, I suspect it is even more difficult for non-math major,

> >>>>non-honor students to absorb.

> >>>

> >>>>I suspect some of the authors have realized this, and decided that

> >>>>the students efforts are better directed at being able to *do*

> >>>>calculus rather than being able to understand a somewhat obscure

> >>>>looking definition.

> >>

> >>> Sigh, more watering down of education.

> >>

> >>>>I'm not saying that decision is correct, just that they are

> >>>>removing a barrier to being able to do calculus that appears to be

> >>>>unimportant for many students.

> >>

> >>> Just wait until they have to hassle with metric spaces, spaces with

> >>>> norms, modern analysis or topology. They'll founder and flop.

> >>

> >>> Not an approach at all helpful for math majors, graduate physics

> >>> majors.

>

> >Agreed. I find it interesting that in the 50's the US was near the

> >>top of the curve in quality of education. Now that we've started

> >>>worrying about social issues in the schools, we're plummeting fast.

>

sci.math: Re: Explaining the foundations of math

- >Sigh. Soon we'll see US plummeting scientifically.
- >
- >Illiterate kids graduated from grade school, colleges having to teach
- >remedial (ie basic high school level) stuff to high school graduates.
- >Argg!
- >
- >>When we're more worried about students' feelings and self-image than
- >>whether they are competent, is it any surprise that many are happily
- >>ignorant?
- >
- >Ignorance is bliss, thus also corporate media censorship
- >of news and alas, even corporate censorship of science.
- >
- >Big Brother doesn't want students who can think for themselves.
- >
- >Big Brother Bush will not publicly thank little Brother Jeb
- >for corrupt Florida elections, neither for 2000 nor for 2004.
- >It'd give thinking students the false notion that election fraud
- >can and has happen to US.
- >
- >But less I stray too far off topic, what are they doing in grade
- >school, are they still teaching numbers, ie arithmetic? Or are
- >youngsters spared such demeaning demoralization by being taught
- >to use hand calculators instead?

There is actually a math book (forgot the name) which recommends that kids use calculators right off the bat. The point is is that many of them already have a nice and intuitive feel for numbers which they've aquired just by playing around. However, when they get to elementary school they begin learning "rules" based on performing some simple (but sometimes counterintuitive) algorithms which have little to do with the math itself. To demonstrate the point, the author even aludes to some statistics showing that many kindergardners (or first graders or whatever) can subtract ($24 - 5 = 9$, etc.) faster than 2nd graders, etc. because the latter are too busy trying to "cross out 2 and make it a one, then, for some reason, write a "1" next to the "4"...etc.") while younger students still tend to invent (and improve on) algorithms they themselves thought up.

Sincerely,
C. Dement

- >These days community colleges are promoting and emphasizing use of
- >graphic calculators as algebra. Does this forebode of yet more
- >mathematical incompetence?
- >
- >-- the Dummy Down Dunce Dance
- >Forlorn am I to scorn

sci.math: Re: Explaining the foundations of math

- > *the land wherein I'm born*
- > *whence creativity is shorn*
- > *to fit some standard norm*
- >
- >-----
- >