Re: ** says: Definition: sum{i in N} i = 0

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- *From*: WM <mueckenh@xxxxxxxxxxxxxxxxx>
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On 7 Jul., 19:44, Virgil <vir...@xxxxxxxxxxx> wrote:

> If you can't see the facts
supporting my discovery
(lim_[x −−> oo]
> P(x)/K(x) in the binary
tree) then further discussion
is meaningless.

Yes, it is meaningless
because you do not see that
that limit is *not*
the necessary value.

The limit is not necessary the value, but for
continuous functions it
is. lim [x−−>o] sinx/x = 1 unless you define
another value at x = 0
and by that make the function discontinuous.

WRONG! The function defined merely by f(x) = sin(x)/x is
not even
defined at x = 0 unless an addition to that definition is
appended to
extend the definition to cover x = 0.

This definition has been given in mathematics once and for all by
l'Hospital.
At least in standard mathematics.

> WRONG! In standard mathematics, any 0/0 situation is standardly UNDEFINED, even when, as in the sin(x)/x case, there is an appropriate limiting value. In sin(x)/x one has a so called "removeable discontinuity" but it is never automatically assumed to have been removed. At least not in standard mathematics.

The question is only this: Can removal of the removable discontinuity yield another result than
lim_[x−−>0] sinx/x = 1?
It cannot. And the same it true for
lim_[n−−>oo] SUM 1+2+3+... +n > m for any m in N.
as well as
lim_[x−−>oo] P(x)/K(x) < 2.

The paths of the tree are continuous, however.

That is an entirely different form of 'continuity' than the continuity
of a real function at a real point. And neither type holds "at oo".

But this kind of continuity guarantees that the limit of K(x)/P(x) is the only reasonable value for the consideration of the whole tree, like l'Hospital delivers the only reasonable value for sinx/x at x = 0.

> It may be the only candidate for continuity, but there is no reason to suppose continuity when one jumps from finite to infinite arguments.
>
> And in this instance there is good reason to doubt it, as there are good reasons to think the number of paths uncountably greater than the number of nodes.

On the other hand, the continuity of the paths guarantees that the result is the only one possible, in mathematics.

Non−existence of a value "at oo" is the standard choice unless one does
some form of compactification to allow even the possibility

of
continuity "at oo" to be considered.

You should look up a good math textbook. There you will find strict divergence, improper limits, and related stuff.

I first learnt my calculus from Apostol, which is QUITE good, but that sterling text does not mention "strict" divergence nor "improper" limits at all.

I don't know it and cannot judge whether it is quite good. At least it is incomplete.

Regards, WM

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