

Re: 1-1/2+1/3-1/4+1/5-1/6+1/7

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- *From:* Han de Bruijn <Han.deBruijn@xxxxxxxxxxxxxxxx>
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Jesse F. Hughes wrote:

Han de Bruijn <Han.deBruijn@xxxxxxxxxxxxxxxx> writes:

Time to hook in with an improved version of my purported "Proof that ZFC is inconsistent" (well, it's not the proper thread, but ..). Scrutinize, please.

Proof that ZFC is inconsistent

You are **so** cute.

Lemma

Let x, y be any sets, then (the `_same_` function S as above):

y is in $S[x]$ iff there is some n such that for all $m > n$
 y is in $S_m[x]$

Here, $n \in \mathbb{N}$, $m \in \mathbb{N}$ and $S_m[x]$ defined as above.

Proof

As an exercise for the interested reader ;-)

Bullshit.

I've already said that this is false, so how do you dare omit the proof?

But, as far as I can see, you HAVEN'T proved that they are NOT the same.

In <87d4r3r3ur.fsf@xxxxxxxxxxxxxx>, I explicitly anticipated this argument. Let

$$T(x) = \{ y \text{ in } N \mid (\exists n \text{ in } N)(\forall m \text{ in } N)(m > n \rightarrow y \text{ in } S_m[x]) \}$$

Then we see that

$$y \text{ is in } S[x] \text{ iff } (\exists z \text{ in } x)(\forall w \text{ in } N)(w \text{ in } y \leftrightarrow (\exists n \text{ in } N)(\forall m \text{ in } N)(m > n \rightarrow w \text{ in } S_m(z)))$$

[the corresponding formula in the previous post was not right, but see below] while

$$y \text{ is in } T(x) \text{ iff } (\exists n \text{ in } N)(\forall m \text{ in } N)(m > n \rightarrow (\exists z \text{ in } x)(y = S_m(z)))$$

If you want to show that $S[x] = T(x)$, then you sure as hell can't leave the proof to *this* reader, because I don't see any reason that it's true.

But, you don't see any reason that it's NOT true either. Am I right?

Lemma:

$$y \text{ is in } S[x] \text{ iff } (\exists z \text{ in } x)(\forall w \text{ in } N)(w \text{ in } y \leftrightarrow (\exists n \text{ in } N)(\forall m \text{ in } N)(m > n \rightarrow w \text{ in } S_m(z)))$$

Proof:

$$y \text{ is in } S[x] \text{ iff } (\exists z \text{ in } x)(y = S[z])$$

$$w \text{ is in } S[z] \text{ iff } (\exists n \text{ in } N)(\forall m \text{ in } N)(m > n \rightarrow w \text{ in } S_m(z)).$$

Note that $S[z] \subset N$, since each $S_m(z) \subset N$.

Thus,

$$y \text{ is in } S[x] \text{ iff } (\exists z \text{ in } x)(\forall w \text{ in } N)(w \text{ in } y \leftrightarrow (\exists n \text{ in } N)(\forall m \text{ in } N)(m > n \rightarrow w \text{ in } S_m(z)))$$

Lemma:

$$y \text{ is in } T(x) \text{ iff } (\exists n \text{ in } N)(\forall m \text{ in } N)(m > n \rightarrow (\exists z \text{ in } x)(y = S_m(z)))$$

Proof:

By definition,

$$y \text{ is in } T(x) \text{ iff } (\exists n \text{ in } N)(\forall m \text{ in } N)(m > n \rightarrow y \text{ in } S_m[x]).$$

y is in $S_m[x]$ iff $(\exists z \text{ in } x)(y = S_m(z))$.

Proof left to reader my ass, Han. That was either just butt-stupid or dishonest. I had *already* suggested[1] that the lemma is false. If you think otherwise, then have the balls to prove it.

Yeah, and let Jesse F. Hughes have the balls to disprove it. Read on.

Footnotes: [1] Though, to be honest, my description of $S[x]$ was simply off.

I agree with you that 90 percent a proof is not a proof, and that I HAVE to proof the Lemma that was left as "an excercise to the reader". Though you could have noticed my smiley .. Shall we conclude that the only flaw in the purported proof is exactly there? Is there anything else wrong? If not, then I only have to repair this weakest link in the chain. OK?

And hey! Don't be so rude. It doesn't serve any purpose.

Han de Bruijn

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