

## Re: need help in understanding Torkel's ZFC comment

**Source:** <http://sci.tech-archive.net/Archive/sci.logic/2004-12/0780.html>

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**From:** Chairman of the David Hilbert Appreciation Society ([mathgeekxxiii\\_at\\_hotmail.com](mailto:mathgeekxxiii_at_hotmail.com))

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Charlie-Boo wrote:

> Josh Purinton <[usenet-noreply.a.jp@xoxy.net](mailto:usenet-noreply.a.jp@xoxy.net)> wrote  
>  
>  
>> Summary of the discussion so far:  
>> Frege > <http://au.metamath.org/mpegif/2p2e4.html>  
>> Charlie-Boo > [6-line informal proof of  $0'' + 0'' = 0'''$ ]  
>> Charlie-Boo > I beat him by 19,725 steps.  
>> Ullrich > That's not a formal proof from the axioms of ZFC.  
>>  
>>  
>>> Neither is the MetaMath proof of  $2+2=4$ .  
>>  
>> Yes it is. If you believe otherwise then point out an axiom that is used  
>> in the proof but is not part of ZFC.  
>  
>  
> Very few of the terminal nodes of the proof tree are ZFC axioms,  
> because ZFC has nothing to do with the fact that  $2+2=4$ . (Only 1 set  
> is involved, so we need not consider the question of what sets exist  
> in general.  $2+2=4$  regardless of what ZFC says.)  
>  
> At these nodes you will find other "axioms", rules that allow  
> arbitrary wffs to be considered proven (unsound) and unverified  
> definitions (also unsound) which must be set up to verify new theorems  
> (a strict no-no in axiomatic systems.) There are also many nodes that  
> have no links or justification, such as ECOPRASS at  
> <http://us.metamath.org/mpegif/ecoprass.html>. What is the  
> justification for lines 23 and 24 (and the other lines labeled  
> "ecoprass")?

Looks like hypotheses of the theorem to me.

> If you want to argue that certain rules "don't count", that is not