Re: Cantor and the binary tree

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In article <1117020437.377622.305540@xxxxxxxxxxxxxxxxxxxxxxxxxxxxx>,
mueckenh@xxxxxxxxxxxxxxxx wrote:

> Robert Kolker wrote:
> > Tony Orlow (aeo6) wrote:
> > >
> > > That's all very well and good, if you specify f anf g and figure those
> > > functions into your comparison. It's a mistake to ignore them.
> >
> > Are you capable of following a proof? Even a three line proof?
>
> Are you capable to follow a five lines proof without referring to "Big
> Brother" Cantor? Consistency of set theory is questioned, hence I do
> not accept Cantor's proof as an argument.
>
> line number n
> 0 0.
> 1 0 1
> 2 0 1 0 1
> ... .
>
>
> 1) Each real number of (0,1) is given by a path stretching over
> infinitely many nodes (bits).
> 2) All nodes (bits) of the tree belong to a countable set.
> 3) A node can only exist within a path.
> 4) Any node increases the number of paths by 1 from 1 coming in, to 2
> going out. 2 − 1 = 1.
> 5) Any node increases the number of nodes by 1.
>
> Please point out which step is wrong.

WM's "proof" disproved"

WM conflates bounded paths, having terminal or leaf nodes with unbounded
unending paths which have no terminal or leaf nodes, but contain
infinitely many intermediate nodes.

1) Each number of (0,1) is given by an UNENDING path stretching over

infinitely many nodes (bits).

2) All nodes (bits) of the tree belong to a countable set.

3) A node can only exist within a path.

4) Any node increases the number of ENDING paths, having terminal or leaf nodes, by 1 from 1 coming in, to 2> going out. 2 − 1 = 1.

5) Any node increases the number of nodes by 1, but have absolutely nothing to do with the number of unending paths.

All unending paths in an unending binary tree contain infinitely many nodes.

The number of leaf no