

# Re: A consideration concerning the diagonal argument of G. Cantor

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On 2008-05-16, Julio Di Egidio <[julio@xxxxxxxxxxxxxx](mailto:julio@xxxxxxxxxxxxxx)> wrote:

So, let's restate it:

Within  $N^*$  (that is,  $N \cup \{\infty\}$ ):  
 $n = \infty \Rightarrow [1/n, 1] = [0, 1]$

With a common definitions of operations in  $N^*$ , yes  $1/\infty = 0$  and so  $[1/n, 1] = [0, 1]$  when  $n = \infty$ .

Within  $N$ :  
 $n \rightarrow \infty \Rightarrow [1/n, 1] = (0, 1] \rightarrow [0, 1]$

Your choice of notation is strange.

Is the first clause " $n \rightarrow \infty$ " supposed to be a limit? Of what?

Is the " $\Rightarrow$ " intended to represent logical implication? It is certainly not true that  $[1/n, 1] = (0,1]$ .

Regarding the second arrow (which also appears to be used as a limit), whether  $[0,1]$  is the limit or  $(0,1]$ , or even whether a limit exists, depends upon what sort of limit you are using – which you haven't defined either.

– Tim

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