

Re: \*\* says: Definition:  $\sum_{i \in \mathbb{N}} i = 0$

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- *From:* Virgil <virgil@xxxxxxxxxxx>
  - *Date:* Mon, 09 Jul 2007 14:11:01 -0600
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In article <1184001296.370640.104990@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx>, WM <mueckenh@xxxxxxxxxxxxxxxxxxx> wrote:

On 9 Jul., 19:00, hagman <goo...@xxxxxxxxxxxxxxxx> wrote:

2) that Liouville did not create uncountably many transcendental numbers.

IIRC, he showed that any number that can be approximated unusually well is transcendental and gave  $\sum 10^{(-n!)}$  as a simple example of an unusually well approximable number.

Yes, you remember correctly.

He would hardly have been surprised to hear that all the numbers  $\sum a_n \cdot 10^{(-n!)}$  are transcendental.

Perhaps he would not even have doubted to be able to use all the infinite sequences you defined. Nevertheless he would have been as unable to do so as is everybody else. Therefore he did not create uncountably many transcendental numbers.

AS they were all there before he came on the scene, he did not create any of them, but he did identify them as irrational and even transcendental.

And WM is still conflating the mathematical existence of a number with its having been physically written down in some positio

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