Re: Cantor Confusion

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- *From*: Virgil <virgil@xxxxxxxxxxx>
- *Date*: Sun, 01 Apr 2007 13:42:47 −0600

In article <1175414674.648660.163490@xxxxxxxxxxxxxxxxxxxxxxxxxxxxx>,
mueckenh@xxxxxxxxxxxxxxxxx wrote:

> On 30 Mrz., 21:07, Virgil <vir...@xxxxxxxxxxx> wrote:
>
> > Thus the order of application of transpositions makes a difference.
>
> That is not a problem at all. We can work like the cleaning service of
> Hilbert hotel: For the first sequence of transposition use half an
> hour, for the second sequence use quarter an hour and so on.

If, for example, the nth transposition exchanges the current occupants
of positions n and n+1, what is the final position of the object
originally in first position?

If it does not have a final position, then what you have constructed is
not a permutation of the members of the list.

> > The replacement of members of a sequence by a rule depending only on the
> > value and not position of the member being replaced is independent of
> > the order of operations. let the rule be to replace any lower case
> > letter by its upper case equivalent.
> >
> > abc−> Abc −> ABc −> ABC is the same as abc −> abC −> AbC −> ABC
> > even though the operations were differently ordered.
> >
> > So the Cantor rule for building an antidiagonal for a list of binary
> > sequences can be applied independently to different digits
>
> Nevertheless it cannot be applied to the n−th digit unless the
> positions 1 to n−1 are known.

It can be applied, as shown above, before anything is /applied/ to prior positions, which is all that is needful for the validity of the Cantor proof.

WM's pseudo−permutation is, unlike Cantor's rule, dependent on order of application.
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