Re: Relative Cardinality

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In article <1120404024.723712.82040@xxxxxxxxxxxxxxxxxxxxxxxxxxxx>,
mueckenh@xxxxxxxxxxxxxxxxx wrote:

> David Kastrup wrote:
> > mueckenh@xxxxxxxxxxxxxxxxx writes:
> >
> > > Relative Cardinality
> > >
> > > Given two finite or infinite sets A and B with elements a e A and b e
> > > B. The union of these sets does exist. If the elements can be put into
> > > an order < (not necessarily a well−order) such that in this order
> > > 1) there are all elements a e A and b e B
> > > 2) there are never two elements b,b' e B without an element a e A
> > > between them with respect to <
> > > then the cardinality Card(B) of B is not larger than the cardinality
> > > Card(A) of A:
> > > Card(B) =< Card(A).
> >
> > So Card({1,3}) =< Card({2}).
> > And card({1}) =< Card({}).
> >
> > Great. Do you even check your ideas with trivial examples?
>
> Of course, by posting them here. Someone will certainly find the error
> if there is one. I did not check the finite case, because it is not so
> interesting. I have to correct my theorem:
>
> Given two finite or infinite sets A and B with elements a e A and b e
> B. The union of these sets does exist. If the elements can be put into
> an order < (not necessarily a well−order) such that in this order
> 1) there are all elements a e A and b e B
> 2) there are never two elements b,b' e B without an element a e A
> between them with respect to < then the cardinality Card(B) of B is at
> most by one larger than the cardinality Card(A) of A: Card(B) =<
> Card(A) + 1.

Still false for B = set of irrationals and A = set of rationals.
>
> > Apart from that, cardinality of a set is a property of the number of

> > elements, and not of their values. So orderedness is not fundamental
> > to cardinality.
>
> Of course order is not fundamental, but if an order can be established,
> then my definition is a sharp criterion to determine whether other
> criteria are meaningful.

Except that it is a false criterion.
>
> > Bijections are
>
> leading to false results and, therefore, they are worthless.

WM's criterion is
leading to false results and, therefore, it is worhtless.
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- ***References***:
  - ***Re: Relative Cardinality***
    - *From:* David Kastrup
  - ***Re: Relative Cardinality***
    - *From:* mueckenh
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