Re: Why not proper subset in definitions?

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From: Will Twentyman (*wtwentyman_at_read.my.sig*)
Date: 06/17/04

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Date: Thu, 17 Jun 2004 17:04:46 −0400
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Adam wrote:

> "Will Twentyman" <wtwentyman@read.my.sig> wrote in message
> news:40d1bcba$1_4@newsfeed.slurp.net...
>
>>>For instance, I thought of the following theorem,
>>>
>>>Theorem. If f: A −> B is a bijective function and S <= A, then
>>>(i) The restriction of f to S is injective.
>>>(ii) The restriction of f to S is not necessarily surjective.
>>
>>Part (ii) doesn't actually say anything.
>>
>>I'd rewrite it as (ii) if S < A, then the restriction of f to S is not
>>surjective.
>
>
> Part (ii) does say something. It says that the restriction of f to S can
> be surjective at times. The reason (ii) seems like it says nothing is
> because of the definition of the restriction of f to S. Since I do not wish
> to re−define terms, part (ii) would have been better worded as something
> along the lines of "(ii) The restriction of f to S is surjective iff S = A,
> as another poster wrote of. Since if S < A then the image of S under f|_S
> can not equal B.

Your rewrite and mine are equivalent. The only interpretations of the original I can see would be:
ii.a) There is a subset S such that the restriction of f to S is not surjective.

ii.b) For a given subset S, the restriction of f to S is or is not surjective.

a) has some content, b) is equivalent to (p v ~p).

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