

Re: Separation, Power and Countability.

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- *From:* zuhair <zaljoahar@xxxxxxxxxx>
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On Jun 19, 11:05 pm, Keith Ramsay <kram...@xxxxxxxx> wrote:

On Jun 19, 7:26 am, zuhair <zaljo...@xxxxxxxxxx> wrote:

|I asked for the proof of the following:

|For any set d that is a member of Pw and is undefinable what is the
|prove of d being equinumerous to w ?

Meaning, I suppose, how can one prove that each
undefinable subset A of w is equinumerous with w .

If A is finite, then A is definable as $\{n : n \text{ is a natural number and } (n=a_0 \text{ or } n=a_1 \text{ or } \dots \text{ or } n=a_m)\}$ for some a_0, \dots, a_m .

If A is undefinable, then, A is infinite and each infinite subset of w is equinumerous with w . Let a_0 be the least element of A , and inductively let a_{k+1} be the least element of A not among a_1, \dots, a_k . Then a_i gives a 1-1 correspondence between A and w .

Keith Ramsay

This depends on choice.
I want it without choice.

Zuhair

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