

## Re: cofinite topology.....

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- *From:* quasi <[quasi@xxxxxxxx](mailto:quasi@xxxxxxxx)>
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On Sat, 3 Sep 2005 09:18:56 +0900, "mina\_world"  
<[mina\\_world@xxxxxxxxxxxx](mailto:mina_world@xxxxxxxxxxxx)> wrote:

>hello.....doctor~

>

>suppose that  $(X, T)$  is cofinite topology space.

> $(T = \{U \text{ in } X \mid U^c : \text{finite set or } X\})$

>

>if  $Y$  is finite subset of  $X$ ,  $\text{int}(Y) = \text{empty set}$ .

>

>-----

>is this right ??

Yes, provided  $X$  is infinite.

>

>i think.....

>if  $X$  is finite set, this is wrong.

Right. I mean yes, it's wrong (hehe) -- well, you know what I mean.

>because,

>if  $X$  is finite set,  $(X, T)$  is discrete topology space.

>so,

>even if  $Y$  is finite set,  $\text{int}(Y) = Y$ .(because,  $Y$  is open set)

The above logic is fine.

>

>and i have another idea.

>i know that finite set on cofinite topology is closed set.

>so, if  $Y$  is finite set, all subset of  $Y$  is closed set.

>so,  $\text{int}(Y) = \text{empty set}$ .

Ah, but just because it's closed doesn't mean its interior is empty.

In fact, in this case,  $Y$  is both closed and open.

>um.....which of case is right ??

>i am confusing.

Re: cofinite topology.....

You were fine until the end when you fooled yourself somehow.

>so, i need your advice.

>thank you very much for your advice.

quasi

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• **References:**

◆ [cofinite topology.....](#)

◇ *From:* mina\_world

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