

Re: A set containing a nonempty open interval

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- *From:* Jim Spriggs <jim.sprigs@xx>
 - *Date:* Fri, 26 Aug 2005 21:59:12 +0000 (UTC)
-

"Keith A. Lewis" wrote:

>
> A N Niel <anniel@xx> writes in article
> <260820051428574700%anniel@xx> dated Fri, 26 Aug 2005 14:28:57 -0400:
> > In article <denmfc\$05k\$1@xx>, Keith A. Lewis
> > <klewis@xx> wrote:
> >
> > > "Amanda" <sca18@xx> writes in article
> > > <1125067955.450481.88600@xx> dated 26 Aug 2005
> > > 07:52:35 -0700:
> > >
> > > > I'd like some hints on how to prove that, if a set S has positive
> > > > Lebesgue measure, then $(A + A)/2 = \{(x + y)/2 \mid x \text{ and } y \text{ are in } A\}$
> > > > contains a non-empty open interval.
> > >
> > > Unless you specify $x < y$, you might get all closed intervals.
> > >
> > > By "contains a non-empty open interval" he means it has a subset which
> > > is a non-empty open interval.
> >
> Since every interval has a subset

Doesn't $[x, x]$ count as an interval?

> which is an open interval, I wonder why
> the word "open" is even in the question.

I was wondering why the word "nonempty" occurred. Maybe (x, x) is an interval, but that seems far more perverse than $[x, x]$.

> Probably not important, I guess.

—
I don't know who you are Sir, or where you come from,
but you've done me a power of good.

Re: A set containing a nonempty open interval

- **Follow-Ups:**
 - ◆ **Re: A set containing a nonempty open interval**
 - ◇ From: Jim Spriggs

- **References:**
 - ◆ **A set containing a nonempty open interval**
 - ◇ From: Amanda
 - ◆ **Re: A set containing a nonempty open interval**
 - ◇ From: Keith A. Lewis
 - ◆ **Re: A set containing a nonempty open interval**
 - ◇ From: A N Niel
 - ◆ **Re: A set containing a nonempty open interval**
 - ◇ From: Keith A. Lewis

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