

Re: f continuous on [a,b] and differentiable on (a,b)–

Source: <http://sci.tech–archive.net/Archive/sci.math/2006–01/msg00767.html>

- *From:* deniz.bahar@xxxxxxxxxx
 - *Date:* 6 Jan 2006 17:28:22 –0800
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G. A. Edgar wrote:

>>>
>>>My question is really why the endpoints are not included for the
>>>differentiable hypothesis. Aren't functions that are continous on
>>>[a,b] and differentiable on (a,b) also differentiable from one side at
>>>the endpoints?
>
> No. Probably if you think about it you can find a counterexample
> yourself.
>

Thanks all, now I understand why the endpoints are not included for differentiability.

One other question. It goes without saying that if a function is differentiable on (a,b) it must be continuous on [a,b]. So why do theorems like Mean Value state the continuous hypothesis separately?

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- *Follow-Ups:*
 - ◆ **Re: f continuous on [a,b] and differentiable on (a,b)–**
◇ *From:* Rouben Rostamian
 - ◆ **Re: f continuous on [a,b] and differentiable on (a,b)–**
◇ *From:* Lee Rudolph
 - *References:*
 - ◆ **f continuous on [a,b] and differentiable on (a,b)**
◇ *From:* deniz . bahar
 - ◆ **Re: f continuous on [a,b] and differentiable on (a,b)–**
◇ *From:* JEMebius
 - ◆ **Re: f continuous on [a,b] and differentiable on (a,b)–**
◇ *From:* G. A. Edgar

Re: f continuous on $[a,b]$ and differentiable on (a,b) –

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