

Re: sin x / x tends to 1...

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- *From:* "N. Silver" <mathelp@xxxxxxxxxxxxxxxxxxxx>
 - *Date:* Mon, 05 Sep 2005 16:42:05 GMT
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Lee Rudolph wrote:

- > From this it follows that, *if you believe* that sin
- > has a (non-zero) derivative *at all*, at any point,
- > then its derivative is cos. Can that belief be justified
- > without assuming the limit under consideration?
- > I suspect it can, by further geometric argument using the
- > helix parametrized by $x \mapsto (\cos(x), \sin(x), x)$.

How would the argument go?

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• **References:**

- ◆ **[sin x / x tends to 1...](#)**
◇ *From:* Darren J Wilkinson
 - ◆ **[Re: sin x / x tends to 1...](#)**
◇ *From:* massimo67
 - ◆ **[Re: sin x / x tends to 1...](#)**
◇ *From:* N. Silver
 - ◆ **[Re: sin x / x tends to 1...](#)**
◇ *From:* Lee Rudolph
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