

# Re: Thinking about metric spaces

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- *From:* quasi <[quasi@xxxxxxxx](mailto:quasi@xxxxxxxx)>
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On Wed, 27 Jun 2007 19:29:16 -0500, quasi <[quasi@xxxxxxxx](mailto:quasi@xxxxxxxx)> wrote:

On Wed, 27 Jun 2007 11:25:02 -0700, bit188 <[mariana@xxxxxxxxxxxxxxxx](mailto:mariana@xxxxxxxxxxxxxxxx)> wrote:

Thanks everyone.

Tommy1729: as regarding my "intentions" with this space, I was going to... eh, \*try\* and define angles and trigonometry, but apparantly that's not a good idea.

Well, it's an interesting idea.

For example, the law of cosines is one possible way.

I think you'd do better not buying the taxicab book.

Play with the ideas yourself at an elementary level. So what if you end up reinventing the wheel? At the early levels, almost anything you try has been tried before and analyzed more completely than you probably would do. Knowing that takes a lot of the joy out of exploration. Of course, you should read the real theories, but on the more experimental stuff, I say just try it. Don't even ask if it was done before (since the answer will almost always be yes).

It's just not as much fun to read what someone else did.

Trying it yourself gives you the sense (even if illusory) of math research — it's exciting and builds self-confidence. Even the failed attempts help develop critical intuition.

As an example of what I'm talking about, here's a simple question.

In a metric space  $X$ , to say 3 points  $a, b, c$  are collinear means what?

## Re: Thinking about metric spaces

There are various possible answers, some more natural than others, but if you haven't yet thought about or seen a discussion of this question, it has value as a thought experiment. Will any answer you propose be sound? Maybe, maybe not, but either way, that's the experience you want. If the idea is sound, will it be new? Probably not, but who cares?

quasi

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