

Re: Question in Geometry

Source: <http://sci.tech-archive.net/Archive/sci.math/2008-09/msg03049.html>

- *From:* miki <miki.livne@xxxxxxxxxx>
 - *Date:* Thu, 25 Sep 2008 03:24:34 -0700 (PDT)
-

On Sep 25, 10:04 am, riderofgiraffes <mathforum.org...@xxxxxxxxxxxxxxxxxx> wrote:

you're not providing any evidence to us
that you are thinking about this at all.

... V_1 is of the form $[a, 0, 0]$ where $a > 0$.

Good. So what is the normalised form of V_1 ?
What does it mean to be normalised? Can you
find a vector of length 1 that points in the
same direction as V_1 ?

I also think that the angles between V_1 and
 V_2 is independent of their length,

Correct.

I dont know how to calculate the angle given
only ϕ and θ and V_2 .

You've been told that already. Check again,
and check carefully. Then if you still have
a problem, tell us what you've tried.

You might also tell us where the problem comes
from so we can better help you understand the

Re: Question in Geometry

stuff that actually matters.

Alright then, let me rephrase the problem because I think that I had made a mistake.

Well, take any vector V_1 (in 3D) that is localised somewhere in the XY plane. In contrast to I wrote earlier, I don't know anything else about V_1 besides this fact.

Consider the vector V_2 with the following properties:

1. The angle between V_2 and its projection on the XY is β .
2. The angle between its projection and the vector V_1 is α

Now, what is the angle between V_1 and V_2 where all I know is: α , β and V_2 .

Well, firstly, you can assume that V_1 is just $(a,0,0)$ because you can rotate the whole thing to align V_1 with the X -axis. Your angles α and β won't change, and neither does the angle between V_1 and V_2 .

Now you can choose the length of V_1 , because that doesn't affect anything either. You may as well assume that V_1 is simply $(1,0,0)$.

Now the very first answer you got is enough to solve the problem. You've still given no indication that you've read that and tried to use it. If you're simply looking for us to give you a formula then you'll either be very lucky, or you'll have to give us a reason for simply giving an answer, because you won't learn anything that way. In a sense, you'd be asking us to do your work for you, for free.

Most people here are happy to teach, but we're not happy to do someone else's work for no reward.

So, given that first answer, what don't you understand?– Hide quoted text –

– Show quoted text –

Re: Question in Geometry

Given the first answer everything is clear. I only have to rotate V_2 using α and β towards V_1 to obtain its direction and now I can project one on the other to achieve the angle between them.

Thanks a lot, that is all I have needed.

Now, regarding the other stuff you wrote, I'm sorry that I sound like what you were implying on me.

It's not that, I only thought that there is a closed simple formula ...

Anyway, thanks again.

.