

Re: P AND Q 2 PARTICLES

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- *From:* Divij Rao <divij_urdbest@xxxxxxxxxxxxx>
 - *Date:* Sun, 15 Jul 2007 05:43:25 -0000
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On Jul 10, 9:47 pm, s...@xxxxxxxxxxxxx wrote:

On 8 juil, 07:50, Divij Rao <divij_urdb...@xxxxxxxxxxxxx> wrote:

First hunch is that you are dealing with an asymptote,
with q trailing behind p at $AB - \Delta AB$

i dont know so much...in simpler words...plz

Hope this helps.

didnot understand the meaning .

André Michaud

thank you,
Divij

Sorry for the delay, I just saw your post.

I requote your question here for convenience:

A and B are 2 positions in coordinate system, particles p,q are at A and B respectively. p moves perpendicular to AB, q is directed towards p always, both have speed= v m/s, distance b/w them initially is d, find the distance b/w them at time=infinity.

Re: P AND Q 2 PARTICLES

I will try to make you see what I conclude.

Imagine position A and B as lying on a horizontal line (x axis ?)

you have p initially located at A and q initially located at B

the distance between p and q is d, and both p and q have the same velocity, so imagine p and q tied together by a string, which will force q to always move towards p as p moves away.

now if you set the particles in motion at velocity v, p is going to move upwards vertically with q being pulled along, always moving towards p.

Now, the string is mentioned only so that you can clearly see how q can always point towards p.

At the beginning, q will move almost horizontally but will progressively angle upwards since it is following p which is moving vertically upwards.

After some time, q will end up moving vertically as it trails behind p. since both have the same velocity, q will be unable to catch up with p and will forever follow behind.

You are dealing with uniform motion for both p and q

I did not do the actual math, so I don't know whether q will catch up some with p. I expect so, but I really wouldn't know without doing the actual math.

André Michaud

excellent idea!

but i m still not sure... suppose p has moved a distance x, after some time say t, by speed, we cant say that distance between p and q is the same, as per the xample, the string MAY become loose. maybe u r correct.

thanks a lot, all comments will be appreciated.

Regards,

Divij

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