
Subject: Re: Center of mass???

Posted by [Paul Hick](#) on Mon, 08 Nov 1999 08:00:00 GMT

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David Fanning wrote:

>
> Anders Wennerberg (anders@mrc.ks.se) writes:
>
>> I have tried to find a routine that could calculate the center of
>> mass, in preliminary 2D but in near future 3D. I would be happy if
>> anyone could give direction where to find that kind of routine.
>
> Here is how you do it in 2D. I've never had to extend
> this to 3D, but when you figure it out, please let us
> know. I'll write up an article on it. :-)
>
> s = Size(array, /Dimensions)
> totalMass = Total(array)
> xcm = Total(Total(array,2) * Indgen(s[0])) / totalMass
> ycm = Total(Total(array,1) * Indgen(s[1])) / totalMass
>
> Cheers,
>
> David

Reasoning by analogy to the 2D case, this should work, I think:

```
xcm = Total( Total(Total(array,3),2) * Indgen(s[0])) / totalMass  
ycm = Total( Total(Total(array,3),1) * Indgen(s[1])) / totalMass  
zcm = Total( Total(Total(array,2),1) * Indgen(s[2])) / totalMass
```

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