
Subject: Re: Compute area between curves

Posted by [Craig Markwardt](#) on Mon, 13 Oct 2008 10:15:56 GMT

[View Forum Message](#) <> [Reply to Message](#)

frankosuna <frankosuna@gmail.com> writes:

> On Oct 12, 3:17i½pm, James Kuyper <jameskuy...@verizon.net> wrote:

>> frankosuna wrote:

>>> Dear IDLers,

>>

>>> How can I compute the area between two curves given two functions?

>>

>> Are the curves closed? That is, do you create the complete curve by

>> drawing a line from the final <x,y> pair to the first <x,y> pair?

>>

>> Are the x values the same for the two curves? Are they evenly spaced?

>>

>> Note: you don't need to post the same question multiple times, this is a

>> newsgroup, not a chat room. Your message will stay up indefinitely. As a

>> general rule, you might have to wait 24 hours or more before getting an

>> answer.

>

> The curves are not closed... I posted some images of the actual rings

> I am trying

> to compare. They look like parabolas. The rings might differ in shift

> and slight rotation from each other. So because the rings might be

Sorry, you are not giving enough information. I.e. your problem is not well defined enough. The "area" under the curves assumes we know what "under" means. One definition could be under=Y, another under=X. And I presume the best "under" might actually be some kind of radial coordinate. Until you know which one you mean, it's difficult to comment.

But assuming it's the radial version, i.e. centered on the planet, then why not transform your X-Y curves to be R-PHI curves, with R and PHI measured from the planet center. Then you could resample to a uniform PHI grid, and compute the whatever difference you want, straightforwardly.

Good luck,
Craig

--

Craig B. Markwardt, Ph.D. EMAIL: cbmarkwardt@usenet@gmail.com
