Re: finding minimum

Source: http://sci.tech−archive.net/Archive/sci.math/2005−11/msg03431.html

- *From*: "Dirk Van de moortel" <dirkvandemoortel@xxxxxxxxxxxxxxxxxxxxxxxxxx>

- *Date*: Tue, 22 Nov 2005 17:52:07 GMT

<mathforsweta@xxxxxxxxx> wrote in message
news:1132679627.949875.180180@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
> Hello Everyone,
>
>
> I have m=min(a,1/2a)..I want to find the largest of m.
>
> I differentialted 1/2a with respect to a and set it equal to zero. That
> is what we do when we want to find maximum or minimum.

I guess you mean 1/(2 a), sometimes also written as 1/(2*a)

>
> the true answer is a=1/sqrt(2)
>
> May be I am doing something wrong?
>
> Can somebody please help me with this problem?

For obvious reasons only looking at positive values
of x, the function
y = x
is monotonously increasing starting at 0 and 'going
to infinity', and the function
y = 1/(2 x)
is monotonously decreasing starting 'at infinity' and
'going to 0'.
So the minimum of the two starts at 0, follows the
line of y = x, increasing up to a certain value, until
it meets the curve of y = 1/(2 x) where it starts
decreasing again.
So you are looking at the intersection point of the
two lines.
hth.

Dirk Vdm

.

- ***References***:
  - ***finding minimum***
    - *From:* mathforsweta@xxxxxxxxx

- Prev by Date: ***Re: Disturbed by alternating series.. help!***
- Next by Date: ***Re: Well Ordering the Reals***
- Previous by thread: ***Re: finding minimum***
- Next by thread: ***3rd deriv exists, convergent function***
- Index(es):
  - ***Date***
  - ***Thread***