Subject: what am I doing wrong?
Posted by babaka on Fri, 17 Feb 1995 00:09:36 GMT
View Forum Message <> Reply to Message

Dear Netters,

I'm trying to plot the funtion:

f(x)=x*log(x/w)-x  (x>0,w>0)

using PV~WAVE.

I know that this function has a minimum at x=w.

To see this, note that

f`(x)=log(x/w)

Setting f`(x)=0 gives x=w. On the other hand:

f``(x)=1/x > 0 for all x

Therefore x=w is the minimum.

THE PROBLEM IS that when I plot this function in PV~WAVE
the minimum appears at another point.

I'm using the following set of commands:

```
WAVE> w=5.0
WAVE> x=INDGEN(400)
WAVE> x=x+0.1 + 0.01  ; x goes from  0.01 to 40.01
WAVE> fx=x*ALOG10(x/w)-x
WAVE> PLOT,x,fx
```

I would appreciate if you would tell me what I'm doing
wrong?

Regards,
Babak

--
Babak A. Ardekani  babaka@atom.ansto.gov.au
Dept. of Nuclear Medicine  phone: +61-2-516-8011
Royal Prince Alfred Hospital  fax:  +61-2-550-5172

Missinden Rd.,  Camperdown, NSW 2050 AUSTRALIA