Subject: what am I doing wrong? Posted by babaka on Fri, 17 Feb 1995 00:09:36 GMT

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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=5.0WAVE> 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

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