Subject: solving non linear equation
Posted by omar ali on Thu, 10 Mar 2016 13:42:42 GMT
View Forum Message <> Reply to Message

Hi,
I have the following equation and I have various values for "y" and i need to calculate "X". can it be solved directly in idl.

y = (a*cos(theta))*h*(1-exp(-2*b*X/cos(theta)))/(2*X*b)

Regards,

Subject: Re: solving non linear equation
Posted by Craig Markwardt on Fri, 11 Mar 2016 23:59:46 GMT
View Forum Message <> Reply to Message

On Thursday, March 10, 2016 at 8:42:44 AM UTC-5, omar ali wrote:
> Hi,
> I have the following equation and I have various values for "y" and i need to calculate "X". can it be solved directly in idl.
>
> y = (a*cos(theta))*h*(1-exp(-2*b*X/cos(theta)))/(2*X*b)

Not sure what you want. If you want a symbolic solution, then no, IDL does not do symbolic manipulation.

If you know values of A, B, THETA and H, then you can probably use a simple procedure like AMOEBA to solve for X. Or better yet, you can probably use some simple iterative approach to solve the problem.

If your goal is to estimate the A, B THETA and H parameters based on your data, then your best bet is to use MPFIT().

Best wishes,
Craig