Subject: ProductLog function
Posted by emitchard on Thu, 01 May 2008 11:32:07 GMT

Hi all, I've used Wolfrang Mathmatica to solve an equation for x, and have been given a solution involving the function ProductLog. I was wondering if anyone knew if there was any inbuilt capacity in IDL to evaluate this. It's definitely different to PRODUCT(ALOG(x)), as I've tried this but results were wrong.

I'm trying to convert a matrix of y's to x's, but the equation I need to use is:

y = 0.0015x + a(1-exp(-bx))

Mathmatica gave me (to 6sf):

0.333333(-2000.a + 2000.y + (3.ProductLog(666.667(a.b.exp(666.667b(1.a-1.y))))))/b

I tried this in IDL, but no joy:

(1D/3D)*(-2000D*a + 2000D*y + (3*(PRODUCT(ALOG((2000D/3D)*a*b*exp((2000D/3D)*b*((a-1D)*(y))))))/b))

Cheers,

Ed