
Subject: Re: "ALOG2" ? (Ugly code follows)
Posted by [luthi](#) on Sat, 03 Apr 1999 08:00:00 GMT
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Amara

wouldn't it be simpler to use the transformations for the base of a logarithm described in any mathematics text?

$\log_2(x) = \ln(x) \cdot \log_2(e)$

(or in idl-language: $\text{alog}_2(x) = \text{alog}(x) \cdot \text{alog}_2(\exp(1.0))$)

then you still have to calculate $\log_2(e)$ but this is $1/\ln(2)$, so the simplified code looks like

```
function alog2, x
  return, alog(x)/alog(2.0)
end ;{alog2}
```

(of course this works for any base)

hope this helps!

Martin

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Subject: Re: "ALOG2" ? (Ugly code follows)
Posted by [Med Bennett](#) on Sat, 03 Apr 1999 08:00:00 GMT
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Hello Amara,

This seems to be a simpler problem than you have indicated:

```
IDL> x=[0.5,1,2,3,4,6,8,10]
IDL> print,alog(x)/alog(2)
-1.00000  0.000000  1.00000  1.58496  2.00000
2.58496  3.00000  3.32193
```

i.e., log base 2 of a number is just the natural log of the number divided by the natural log of 2. Am I missing something?
