Subject: Looking for Mittag-Leffler function
Posted by mzkiss on Wed, 11 Feb 2004 16:28:50 GMT
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Hi everyone! I am trying to write a code which will generate the Mittag-Leffler function,

E_alpha(x) = sum(k = 0 to infinity) (x^k)/gamma(alpha*k + 1).

There are more general cases, but in this particular application, x is real, and alpha is between 0 and 1. Oh, and as a special case, if alpha = 1, then this reduces to exp(x). My problem is that coding it up as is works up to a point before reaching machine limits (x^k for large x and large k, as well as large values of the gamma function), but I need solutions for large x (x >= 20).

Can anyone point me in the right direction?
Thanks,
Mik Kiss