1 Example `FoxH-H.G_2_9_14.wls`

File content

Fox H-function

$$H^{1,1}_{1,2}\left(\cdot\ \middle|\ \begin{array}{l} (1-a,1) \\ \\ (0,1)\,,(1-c,1) \end{array}\right)$$

$$H^{1,1}_{1,2}\left(\cdot\ \middle|\ \begin{array}{c|c} (1-a,1) & \\ \hline (0,1) & (1-c,1) \end{array}\right)$$

Summary

$$\begin{aligned} a^* &= 1 \\ \Delta &= 1 \\ \delta &= \text{ComplexInfinity} \\ \mu &= a-c-\frac{1}{2} \\ a_1^* &= 1 \\ a_2^* &= 0 \\ \xi &= c-a \\ c^* &= \frac{1}{2} \end{aligned}$$

Poles **1. First eight poles from upper front list**

$$a_{i,k} = \begin{pmatrix} a & a+1 & a+2 & a+3 & a+4 & a+5 & a+6 & a+7 \end{pmatrix}$$

2. First eight poles from lower front list

$$b_{j,\ell} = \begin{pmatrix} 0 & -1 & -2 & -3 & -4 & -5 & -6 & -7 \end{pmatrix}$$

Source This example is from (2.9.14) of [KS04]:

2 Example FoxH-H.G_2_9_14.wls

$$H^{1,1}_{1,2}\left(\cdot \left| \begin{matrix} (1-a,1) \\ \\ (0,1),(1-c,1) \end{matrix} \right.\right)$$

(2.9.14) is the following so-called confluent hypergeometric function of Kummer(Erdelyi,Magnus,Oberhettinger and Tricomi[equation (1), 6.1, page 248]

$$1+\frac{a}{c}\frac{x}{1!}+\frac{a(a+1)}{c(c+1)\frac{x^2}{2!}}+cdots. \tag{1}$$

In the notation of generalized hypergeomeiric series,

References

[KS04] Anatoly A. Kilbas and Megumi Saigo. *H-transforms*. Vol. 9. Analytical Methods and Special Functions. Theory and applications. Chapman & Hall/CRC, Boca Raton, FL, 2004, pp. xii+389. ISBN: 0-415-29916-0. DOI: 10.1201/9780203487372. URL: https://doi.org/10.1201/9780203487372.