

# 1 Example FoxH32-21-Z.wls

File content

Fox H-function

$$H_{2,3}^{2,1} \left( \cdot \left| \begin{array}{c} (1, 1), ([\beta], \beta) \\ (\frac{d}{2}, \frac{\alpha}{2}), (1, 1), (1, \frac{\alpha}{2}) \end{array} \right. \right)$$

$$H_{2,3}^{2,1} \left( \cdot \left| \frac{(1, 1)}{(\frac{d}{2}, \frac{\alpha}{2}), (1, 1)} \right| \frac{([\beta], \beta)}{(1, \frac{\alpha}{2})} \right)$$

Summary

$$\begin{aligned} a^* &= 2 - \beta \\ \Delta &= \alpha - \beta \\ \delta &= 2^{-\alpha} \alpha^\alpha \beta^{-\beta} \\ \mu &= \frac{1}{2}(-2[\beta] + d + 1) \\ a_1^* &= \frac{1}{2}(\alpha - 2\beta + 2) \\ a_2^* &= 1 - \frac{\alpha}{2} \\ \xi &= \frac{1}{2}(-2[\beta] + d + 2) \\ c^* &= \frac{1}{2} \end{aligned}$$

Poles 1. First eight poles from upper front list

$$a_{i,k} = \left( \begin{array}{cccccccc} 0 & 1 & 2 & 3 & 4 & 5 & 6 & 7 \end{array} \right)$$

2. First eight poles from lower front list

$$b_{j,\ell} = \begin{pmatrix} -\frac{d}{\alpha} & -\frac{d+2}{\alpha} & -\frac{d+4}{\alpha} & -\frac{d+6}{\alpha} & -\frac{d+8}{\alpha} & -\frac{d+10}{\alpha} & -\frac{d+12}{\alpha} & -\frac{d+14}{\alpha} \\ -1 & -2 & -3 & -4 & -5 & -6 & -7 & -8 \end{pmatrix}$$

**Source** This is the fundamental solution to the fractional diffusion equation used, e.g., in [**chen.hu.ea:17:space-time**; **chen.hu.ea:19:nonlinear**; **chen.eisenberg:22:interpolating**; **chen.guo.ea:22:moments**].