1 Example `test.wls`

File content

```
{
  (* Upper List *) {
    (* Upper Front list *) {{1, \[Alpha]^(-1)}, {1, 1}},
    (* Upper Rear List *)  {{Ceil[\[Beta]], \[Beta]}, {1, 1}}
  },
  (* Lower List *) {
    (* Lower Front List *) {{1/2, \[Alpha]/2}, {1, 1}, {3, 3}, {2, 2}},
    (* Lower Rear List *)  {{1, \[Alpha]/2}}
  }
}
```

Fox H-function

$$H_{4,5}^{4,2}\left(\cdot\,\middle|\,\begin{matrix}\left(1,\frac{1}{\alpha}\right),(1,1),(\mathrm{Ceil}(\beta),\beta),(1,1)\\ \left(\frac{1}{2},\frac{\alpha}{2}\right),(1,1),(3,3),(2,2),\left(1,\frac{\alpha}{2}\right)\end{matrix}\right)$$

$$H_{4,5}^{4,2}\left(\cdot\,\middle|\,\begin{matrix}\left(1,\frac{1}{\alpha}\right),(1,1) & (\mathrm{Ceil}(\beta),\beta),(1,1)\\ \hline \left(\frac{1}{2},\frac{\alpha}{2}\right),(1,1),(3,3),(2,2) & \left(1,\frac{\alpha}{2}\right)\end{matrix}\right)$$

Summary

$$
\begin{aligned}
a^* &= \frac{1}{\alpha} - \beta + 6 \\
\Delta &= \alpha - \frac{1}{\alpha} - \beta + 4 \\
\delta &= \frac{2^{-\alpha}\left(2^{\frac{\alpha}{2}+5}\alpha^{\alpha/2} + \alpha^{\alpha}\right)}{\left(\left(\frac{1}{\alpha}\right)^{\frac{1}{\alpha}} + 1\right)(\beta^{\beta} + 1)} \\
\mu &= 4 - \mathrm{Ceil}(\beta) \\
a_1^* &= \frac{\alpha}{2} - \beta + 5 \\
a_2^* &= -\frac{\alpha}{2} + \frac{1}{\alpha} + 1 \\
\xi &= \frac{13}{2} - \mathrm{Ceil}(\beta) \\
c^* &= \frac{3}{2}
\end{aligned}
$$

Poles 1. First ten poles from upper front list

$$a_{i,k} = \begin{pmatrix} 0 & 0 \\ \alpha & 1 \\ 2\alpha & 2 \\ 3\alpha & 3 \\ 4\alpha & 4 \\ 5\alpha & 5 \\ 6\alpha & 6 \\ 7\alpha & 7 \\ 8\alpha & 8 \\ 9\alpha & 9 \\ 10\alpha & 10 \end{pmatrix}$$

2. First ten poles from lower front list

$$b_{j,\ell} = \begin{pmatrix} -\frac{1}{\alpha} & -1 & -1 & -1 \\ -\frac{3}{\alpha} & -2 & -\frac{4}{3} & -\frac{3}{2} \\ -\frac{5}{\alpha} & -3 & -\frac{5}{3} & -2 \\ -\frac{7}{\alpha} & -4 & -2 & -\frac{5}{2} \\ -\frac{9}{\alpha} & -5 & -\frac{7}{3} & -3 \\ -\frac{11}{\alpha} & -6 & -\frac{8}{3} & -\frac{7}{2} \\ -\frac{13}{\alpha} & -7 & -3 & -4 \\ -\frac{15}{\alpha} & -8 & -\frac{10}{3} & -\frac{9}{2} \\ -\frac{17}{\alpha} & -9 & -\frac{11}{3} & -5 \\ -\frac{19}{\alpha} & -10 & -4 & -\frac{11}{2} \\ -\frac{21}{\alpha} & -11 & -\frac{13}{3} & -6 \end{pmatrix}$$