

$$\begin{aligned}
&E^{\frac{3}{2}}m!\Gamma\left(\frac{1-m}{2}-\nu\right) \\
&WhittakerW[\nu,\frac{m}{2},z]=-\left(\frac{(-1)^m z^{\frac{1+m}{2}}\text{Ln } z}{E^{\frac{3}{2}}m!\Gamma\left(\frac{1-m}{2}-\nu\right)\left(1+\mathop{\mathrm{K}}\limits_{k=1}^{\infty}\frac{\frac{-z(-1+2k+m-2\nu)}{2k(k+m)}}{1+\frac{z(-1+2k+m-2\nu)}{2k(k+m)}}\right)}\right)+\frac{z^{\frac{1-m}{2}}(-1+m)!}{E^{\frac{3}{2}}\Gamma\left(\frac{1+m-2\nu}{2}\right)\left(1+\mathop{\mathrm{K}}\limits_{k=1}^{\infty}\frac{\frac{z(1-2k+m+2\nu)}{2k(k-m)}}{1-\frac{z(1-2k+m+2\nu)}{2k(k-m)}}\right)}-\frac{(-1)^m z^{\frac{1+m}{2}}\left(EulerGamma-\psi^{(0)}(1+m)+\psi^{(0)}\left(\frac{1+m}{2}-\nu\right)\right)}{E^{\frac{3}{2}}m!Gamma[\frac{1-m}{2}-\nu]\left(1+\mathop{\mathrm{K}}\limits_{k=1}^{\infty}\frac{\frac{-z(-1+2k+m-2\nu)\left(\psi^{(0)}(1+k)+\psi^{(0)}(1+k+m)-\psi^{(0)}\left(k+\frac{1+m}{2}-\nu\right)\right)}{2k(k+m)\left(\psi^{(0)}(k)+\psi^{(0)}(k+m)-\psi^{(0)}\left(-\frac{1}{2}+k+\frac{m}{2}-\nu\right)\right)}}{1+\frac{z(-1+2k+m-2\nu)\left(\psi^{(0)}(1+k)+\psi^{(0)}(1+k+m)-\psi^{(0)}\left(k+\frac{1+m}{2}-\nu\right)\right)}{2k(k+m)\left(\psi^{(0)}(k)+\psi^{(0)}(k+m)-\psi^{(0)}\left(-\frac{1}{2}+k+\frac{m}{2}-\nu\right)\right)}}\right)},Element[m,Integers]\wedge Element[\nu|z,Complexes]\wedge m>0 \\
&\left(E^{\frac{3}{2}}m!\Gamma\left(\frac{1-m}{2}-\nu\right)(1)\right) \\
&\Gamma
\end{aligned}$$