unit ball

$$\lambda = 1 - \ell$$

$$D_{\underset{\omega}{\triangle}}^{2} \overset{d+\ell}{\mathbb{C}} = \sum_{\mu_r \geqslant \ell} Z_{\underset{\bullet}{\triangle}} \overset{\mu}{\mathbb{C}}$$

$$\daleth \underset{d+\ell}{\bowtie} \beth = \sum_{\mu \geqslant \ell} \frac{\daleth^{\mu} \bowtie \beth^{\mu}}{(\ell-1)!\,(\mu-\ell)!}$$

$$\lambda = 0$$

$$D_{\underset{\omega}{\triangle}}^{2} \overset{d+1}{\mathbb{C}} = \sum_{\mu_r > 0} Z_{\underset{\bullet}{\triangle}} \overset{\mu}{\mathbb{C}}$$

$$\daleth \underset{d+2}{\bowtie} \beth = \sum_{\mu > 0} \frac{\daleth^{\mu} \bowtie \beth^{\mu}}{(\mu-1)!}$$

$$\alpha > (r-1)\,a/2$$

$$\ell \in \mathbb{N}$$

$$^{z}\overbrace{\partial \mathfrak{s}_e^{\ell} \daleth} = \frac{\Gamma_{\alpha+\ell}}{\Gamma_{\alpha}} \underbrace{\mathfrak{s}_e^{\ell} \Delta_z^{-\alpha-\ell}} \underset{\alpha}{\bowtie} \daleth$$

$$^{z}\mathfrak{s}_e^{\ell}\ {}^{z}\mathfrak{s}_w^{\mu}\ {}^{w}\bar{\mathfrak{s}}_e^{\ell} = \frac{(d/r)_{\mu+\ell}}{(d/r)_{\mu}}\ {}^{z}\mathfrak{s}_w^{\mu+\ell}$$

$$^{z}\mathfrak{s}_e^{\ell}\ {}^{z}\Delta_w^{-\alpha-\ell} = \sum_{\mu \geqslant 0} \frac{(\alpha+\ell)_{\mu}\ (d/r)_{\mu+\ell}}{(d/r)_{\mu}}\ {}^{z}\mathfrak{s}_w^{\mu+\ell}\ {}^{w}\bar{\mathfrak{s}}_e^{-\ell}$$

$$\Rightarrow \underbrace{\mathfrak{s}_e^{\ell}\ \Delta_z^{-\alpha-\ell}} \underset{\alpha}{\bowtie} \daleth = \sum_{\mu \geqslant 0} \frac{(\alpha+\ell)_{\mu}\ (d/r)_{\mu+\ell}}{(d/r)_{\mu}\ \alpha_{\mu+\ell}}\ {}^{z}\daleth_{\mu+\ell}\ {}^{z}\mathfrak{s}_e^{-\ell} = \frac{\Gamma_{\alpha}}{\Gamma_{\alpha+\ell}} \sum_{\nu_r \geqslant \ell} \frac{(d/r)_{\nu}}{(d/r)_{\nu-\ell}}\ {}^{z}\daleth_{\nu}\ {}^{z}\mathfrak{s}_e^{-\ell} = \frac{\Gamma_{\alpha}}{\Gamma_{\alpha+\ell}}\ {}^{z}\overbrace{\partial \mathfrak{s}_e^{\ell} \daleth}$$

$$\lambda \in \text{ pole set}$$

$$\ell = d/r - \lambda$$

$$\nu = \ell + d/r = p - \lambda$$

$$\partial \mathfrak{s}_e^{\ell} \underbrace{g \ltimes \rceil}_{\lambda} = g \underset{p-\lambda}{\ltimes} \underbrace{\partial \mathfrak{s}_e^{\ell} \rceil}$$

$$v = u \cdot \varphi_a \Longrightarrow \begin{cases} u = v \cdot \varphi_a \\ du = \overline{{}^{v}\underline{\varphi}_a} dv \end{cases}$$

$$^{v\varphi_a}\mathfrak{s}_e = \frac{a - {}^{v}\mathfrak{s}_e}{{}^{v}\Delta_a} = \frac{-{}^{v}\mathfrak{s}_e{}^{a}\Delta_v}{{}^{v}\Delta_a}$$

$$\frac{\Gamma_\alpha}{\Gamma_{\alpha+\ell}} \, {}^{z}\overbrace{\partial \mathfrak{s}_e^{\ell} \underbrace{\varphi_a \ltimes \rceil}_{\lambda}} \underset{\text{Lem}}{\overset{\alpha = d/r}{=}} \underbrace{\mathfrak{s}_e^{\ell} \Delta_z^{\lambda - p}} \underset{d/r}{\Join} \underbrace{\varphi_a \ltimes \rceil}_{\lambda} = \int_S^{du} {}^{u\varphi_a}\rceil \, {}^{u}\underline{\varphi}_a^{\lambda/p} \, {}^{u}\bar{\mathfrak{s}}_e^{\ell} \, {}^{z}\Delta_u^{\lambda - p} = \int_S^{dv} \overline{{}^{v}\underline{\varphi}_a} \, {}^{v}\rceil \, {}^{v}\underline{\varphi}_a^{-\lambda/p} \, {}^{v\varphi_a}\bar{\mathfrak{s}}_e^{\ell} \, {}^{z}\Delta_{v\varphi_a}^{\lambda - p}$$

$$= \int_S^{dv} {}^{v}\rceil \, {}^{v}\bar{\mathfrak{s}}_e^{\ell} \, {}^{z\varphi_a}\Delta_v^{\lambda - p} \frac{{}^{v}\Delta_a^{\ell}}{{}^{a}\Delta_v^{\ell}} \, {}^{z}\underline{\varphi}_a^{1 - \lambda/p} \, \overline{{}^{v}\underline{\varphi}_a} \, {}^{v}\underline{\varphi}_a^{-\lambda/p} \, {}^{v}\bar{\underline{\varphi}}_a^{1 - \lambda/p}$$

$$= {}^{z}\underline{\varphi}_a^{1 - \lambda/p} \int_S^{dv} {}^{v}\rceil \, {}^{v}\bar{\mathfrak{s}}_e^{\ell} \, {}^{z\varphi_a}\Delta_v^{\lambda - p} \, {}^{v}\Delta_a^{(\ell + \overset{=0}{\lambda -} p/2)} \, {}^{a}\Delta_v^{(-\ell + p \overset{=0}{-} \lambda - p/2)} \, {}^{a}\Delta_a^{p\overbrace{\lambda/p - 1 - \lambda/p + 1}^{=0}/2}$$

$$= {}^{z}\underline{\varphi}_a^{\nu/p} \int_S^{dv} {}^{v}\rceil \, {}^{v}\bar{\mathfrak{s}}_e^{\ell} \, {}^{v}\bar{\Delta}_{z\varphi_a}^{\lambda - p} = {}^{z}\underline{\varphi}_a^{1 - \lambda/p} \, {}^{z\varphi_a}\overline{\partial \mathfrak{s}_e^{\ell} \rceil} = {}^{z}\overline{\varphi_a \underset{p-\lambda}{\ltimes} \rceil}$$

$${}^{z}\mathfrak{s}_e^{\ell} \, {}^{w}\bar{\mathfrak{s}}_e^{\ell} \, {}^{z}\Delta_w^{-\alpha + \ell} = {}_2F_1 \, (d/r{:}\alpha|\lambda)$$