

$$\int\limits_{dx}^{Z_1}{}^x\mathfrak{I}=\int\limits_{dt}^{0|\infty}\varrho\left(t\right)\int\limits_{du}^{S_1}{}^{tu}\mathfrak{I}$$

$$\int\limits_{du}^{S_1}{}^a\mathcal{E}_u^m{}^u\mathcal{E}_b^m={}^a\mathcal{E}_b^m\frac{\left(a/2\right)_m}{\left(ra/2\right)_m\left(d/r\right)_m}={}^a\mathcal{E}_b^m\frac{\Gamma_{m+a/2}}{\Gamma_{m+ra/2}\Gamma_{m+d/r}}$$

$${}^z\mathcal{E}_w^m=\frac{z\overset{m}{\mathfrak{X}}w}{m!}$$

$$\int\limits_{du}^{S_1}{}^u\bar{p}{}^uq=\frac{\Gamma_{m+a/2}}{\Gamma_{m+ra/2}\Gamma_{m+d/r}}p\overset{\mathfrak{X}}{\mathbb{Z}}q$$

$$\int\limits_{dt}^{0|\infty}\delta\left(t\right)t^n=\frac{\left(a/2\right)_n}{c_n}=\left(ra/2\right)_n\left(d/r\right)_n=\Gamma_{n+ra/2}\Gamma_{n+d/r}$$

$$\int\limits_{dt}^{0|\infty}\delta\left(t\right)t^\lambda=\Gamma_{\lambda+ra/2}\Gamma_{\lambda+d/r}$$

$$\int\limits_{dx}{}^x\mathfrak{I}=\int\limits_{dt}^{0|\infty}\delta\left(t\right)\int\limits_{du}^{S_1}{}^{u\sqrt{t}}\mathfrak{I}$$

$$\int\limits_{dx}\frac{a\overset{m}{\mathfrak{X}}x}{m!}\frac{x\overset{n}{\mathfrak{X}}b}{n!}=\left(a/2\right)_n\frac{a\overset{n}{\mathfrak{X}}b}{n!}$$

$$\text{LHS}=\int\limits_{dt}^{0|\infty}\delta\left(t\right)\int\limits_{du}^{S_1}\frac{a\overset{m}{\mathfrak{X}}u\sqrt{t}}{m!}\frac{u\sqrt{t}\overset{n}{\mathfrak{X}}b}{n!}=\int\limits_{dt}^{0|\infty}\delta\left(t\right)t^n\int\limits_{du}^{S_1}\frac{a\overset{m}{\mathfrak{X}}u}{m!}\frac{u\overset{n}{\mathfrak{X}}b}{n!}=c_n\frac{a\overset{n}{\mathfrak{X}}b}{n!}\int\limits_{dt}^{0|\infty}\delta\left(t\right)t^n=\text{RHS}$$

$$\int\limits_{dt}t^{a\left(r-1/2\right)}\mathcal{K}_{a/2-1}\left(2t\right)\int\limits_{du}^{S_1}{}^{tu}\mathfrak{I}$$

$$\int\limits_{dt}t^\mu\mathcal{K}_\nu\left(2t\right)=\Gamma_{\left(1+\mu+\nu\right)/2}\Gamma_{\left(1+\mu-\nu\right)/2}$$