$$\frac{{}^{e}\mathcal{E}_{e}^{m}}{d_m} = \frac{1}{(d/r)_m}$$

$$\frac{1}{(d/r)_m}\,{}^{e}\mathcal{E}_{e}^{m} = \frac{1}{(d/r)_m}\,\mathcal{E}_{e}^{m} \underset{Z}{\blacktriangledown} \mathcal{E}_{e}^{m} = \mathcal{E}_{e}^{m} \underset{S}{\blacktriangledown} \mathcal{E}_{e}^{m} = \int_{dk}^{K} {}^{e}\mathcal{E}_{ke}^{m}\,{}^{ke}\mathcal{E}_{e}^{m} = \frac{1}{d_m}\,{}^{e}\mathcal{E}_{e}^{m}\,{}^{e}\mathcal{E}_{e}^{m}$$

$$\frac{{}^{z}\mathcal{E}_{e}^{m}}{d_m} = \frac{{}^{z}\phi^{m}}{(d/r)_m}$$

$${}^{u_\ell}\phi^{m} = \frac{(\ell a/2)_m}{(ra/2)_m} \Longrightarrow {}^{t}\phi_{\ell}^{m} = \frac{(ra/2)_m}{(\ell a/2)_m}\,{}^{t}\phi^{m}$$

$$\frac{{}^{u_\ell}\mathcal{E}_{u_\ell}^{m}}{d_m} = \frac{{}^{u_\ell}\phi^{m}}{(d/r)_m} = \frac{(\ell a/2)_m}{(d/r)_m (ra/2)_m}$$

$$p \underset{S_\ell}{\blacktriangledown} q = \frac{(\ell a/2)_m}{(d/r)_m (ra/2)_m}\, p \underset{Z}{\blacktriangledown} q$$

$$\mathcal{E}_{a}^{m} \underset{S_\ell}{\blacktriangledown} \mathcal{E}_{b}^{m} = \int_{dk}^{K} {}^{a}\mathcal{E}_{ku_\ell}^{m}\,{}^{ku_\ell}\mathcal{E}_{b}^{m} = \frac{1}{d_m}\,{}^{a}\mathcal{E}_{b}^{m}\,{}^{u_\ell}\mathcal{E}_{u_\ell}^{m} = {}^{a}\mathcal{E}_{b}^{m}\,\frac{(\ell a/2)_m}{(d/r)_m (ra/2)_m}$$