「 $\eta(z) = \dfrac{1}{p!q!} \sum_{I,J,\alpha} \eta_{I,J,\alpha}\ \varphi_I \wedge \overline{\varphi_J} \otimes e_\alpha$

where, if $\varphi_I \wedge \overline{\varphi_J} = \epsilon\ \varphi_{I'} \wedge \overline{\varphi_{J'}}$, then

$$\eta_{I,J,\alpha} = \epsilon\ \eta_{I',J',\alpha}.$$

$$\psi(z) = \frac{1}{p!q!} \sum_{I',J',\alpha'} \psi_{I',J',\alpha'}\ \varphi_{I'} \wedge \overline{\varphi_{J'}} \otimes e_{\alpha'}$$

$$\Rightarrow \langle \eta(z), \psi(z) \rangle = \left(\frac{1}{p!q!}\right)^2 \cdot (p!q!)^2 \sum_{I,J,\alpha} \eta_{I,J,\alpha} \overline{\psi_{I,J,\alpha}} \langle \varphi_I \wedge \overline{\varphi_J}, \varphi_I \wedge \overline{\varphi_J} \rangle$$

$$= \left(\frac{1}{p!q!}\right)^2 (p!q!) \sum_{I,J,\alpha} \eta_{I,J,\alpha} \overline{\psi_{IJ\alpha}}\ 2^{p+q}$$

$$= \frac{2^{p+q}}{p!q!} \sum_{I,J,\alpha} \eta_{I,J,\alpha} \overline{\psi_{I,J,\alpha}}.$$

since, for each fixed I, J, α,

$\exists$ exactly $p!q!$ $\psi_{I',J',\alpha}$ s.t. $\psi_{I',J',\alpha} = \epsilon\ \psi_{I,J,\alpha}$.

where ϵ is dependent on I', J'. 」」

「 I think. 2^{p+q-n} should be replaced by 2^{p+q}. 」」

Again, we define an inner product on $A^{p,q}(E)$ by setting

$$(\eta, \psi) = \int_M (\eta(z), \psi(z))\ \Phi,$$

where Φ is the volume form on M.