$$\operatorname{tr} u \overset{*}{v} = \frac{p}{2} (u|v)$$

$$e = e_1 + \cdots + e_r$$

$$\operatorname{tr} e \overset{*}{e} = \dim Z_e^1 + \frac{1}{2} \dim Z_e^{1/2} = r + \frac{a}{2} r (r-1) + \frac{1}{2} rb = \frac{r}{2} (2 + a(r-1) + b) = \frac{r}{2} p = \frac{p}{2} (e|e)$$

$$U_g^{-1} q(z) = \overline{\det \underline{g}_z}^{\nu/p} q(g \cdot z)$$

$$-\underline{U}_\gamma q(z) = \frac{\nu}{p} \operatorname{tr} \underline{\gamma}_z q(z) + \underline{q}(z) \gamma(z)$$

$$\gamma_w(z) = w - z \overset{*}{w} z$$

$$\ell_w(z) = z|w$$

$$\nu = \frac{\ell a}{2}$$

$$\underline{U}_w q(z) = \nu (z|w) q(z) + \underline{q}_z (z \overset{*}{w} z - w)$$

$$\underline{U}_w q = \nu \ell_w q + \overline{\partial_{\overset{*}{w}} - \partial_w} q$$

$$\underline{\gamma}_w(z) = -2z \overset{*}{w}$$

$$\frac{\nu}{p} \operatorname{tr} \underline{\gamma}_w(z) = -\frac{2\nu}{p} \operatorname{tr} z \overset{*}{w} = -\nu (z|w)$$

$$\mathrm{LHS} = \nu (z|w) q(z) + \underline{q}(z) (z \overset{*}{w} z - w) = \mathrm{RHS}$$

$$p \maltese \widehat{\nu\ell_w q + \partial_{\underset{w}{*}} q} = \widehat{\partial_w p} \maltese q$$

$$p \maltese \widehat{\underline{U}_w q} = -\widehat{\underline{U}_w p} \maltese q$$

$$p \maltese \widehat{\nu\ell_w q + \partial_{\underset{w}{*}} q - \partial_w q} = \widehat{\partial_w p - \nu\ell_w p - \partial_{\underset{w}{*}} p} \maltese q$$

$$p \maltese \widehat{\nu\ell_w q + \partial_{\underset{w}{*}} q} = \widehat{\partial_w p} \maltese q$$

$$p \maltese \underline{U}_w q = \widehat{\partial_w p} \maltese q - p \maltese \widehat{\partial_w q}$$

$$\text{LHS} = p \maltese \widehat{\nu\ell_w q + \partial_{\underset{w}{*}} q - \partial_w q} = p \maltese \widehat{\nu\ell_w q + \partial_{\underset{w}{*}} q} - p \maltese \partial_w q = \text{RHS}$$