So $A\gamma(v_{\sigma(1)}, \ldots, v_{\sigma(n)})$

$= \cancel{\epsilon}\ \varepsilon_\sigma A\gamma(v_1, \ldots, v_n).$

Similarly, $S\gamma \in \mathrm{Sym}(\cancel{T_0^k}\ T_0^k(V))$

QQ: how does defining $\otimes$ on $T_j^i \times T_l^k$

define a bilinear product

Natural ways: on $T(V) \times T(V)$

Well,

Given

$\alpha = (\alpha_1, \ldots)$

similarly for Λ?

$\underline{\alpha \wedge \beta \in \Lambda^{r+s}(V)}$

as $\alpha \otimes \beta \in T_0^{r+s}$.

A 0-form is a map $f: \{0\} \to \mathbb{R}$