

Skalární součin ve formách

$$\omega \cdot \sigma = \omega \cdot \# \sigma = \frac{1}{p!} \omega_{a_1 \dots a_p} \sigma^{a_1 \dots a_p} = \sum_{a_1 < \dots < a_p} \omega_{a_1 \dots a_p} \sigma^{a_1 \dots a_p}$$

Dokažte:

$$(1) \quad (*\omega) \cdot (*\sigma) = (\text{sign } g) \omega \cdot \sigma$$

$$\omega, \sigma \in \Lambda^p M$$

$$(2) \quad \omega \wedge (*\sigma) = \sigma \wedge (*\omega) = \omega \cdot \sigma \, \varepsilon = *(\omega \cdot \sigma)$$