

$$\begin{aligned} 58. \langle E_i dx^i, E_j dx^j \rangle &= E_i E_j \underbrace{\langle dx^i, dx^j \rangle}_{\delta^{ij}} \\ &= \sum_{i=1}^n E_i^2 \end{aligned}$$

Similarly,

$$\begin{aligned} \langle B, B \rangle &= \langle B_x dy \wedge dz + B_y dz \wedge dx + B_z dx \wedge dy, B_x dy \wedge dz + B_y dz \wedge dx + B_z dx \wedge dy \rangle \\ &= B_x^2 + B_y^2 + B_z^2 \quad (\text{only pairings which survive}) \end{aligned}$$