Theoretische Physik 2 (Elektrodynamik)
Wintersemester 2016/17

Präsenzübung Dieses Blatt wird in den Übungen vom 24.10. - 28.10.16 besprochen.

Aufgabe 1:
Transformation rule for vectors and pseudovectors
Discuss the transformation of momentum $\mathbf{p}$, position $\mathbf{x}$ and angular momentum $\mathbf{L} = \mathbf{x} \times \mathbf{p}$. Identify whether these are vectors or pseudovectors.

Aufgabe 2:
Inertial tensor for a cube
For a cube of length s with density ρ, with one corner at the origin and its edges along the positive axes, calculate the inertial tensor Θ_{ij}. Calculate its eigenvalues and compare with a cube aligned with the coordinate axes and centred at the origin.