

1. Read A&H Ch 3 and 4, and Appendix A
2. True/False: I read this material.
3. A&H problem 4.2
4. A&H problem 4.4
5. A&H problem 4.6
(these are helicity eigenstates)
6. A&H problem 4.10
7. A&H problem 4.11
8. Demonstrate that ∂_μ transforms in the same way as $x_\mu \equiv g_{\mu\nu}x^\nu$ (in a few lines, using the general properties of $\Lambda^{\mu'}{}_\nu$).
9. By considering the determinant of Λ , show that the antisymmetric tensor $\epsilon_{\mu\nu\alpha\beta}$ is invariant under proper Lorentz transformations, and that d^4x is a scalar.