

# PHYS 575, HW #4

Due: 3/4/20

1. **Spinor outer products.** Schwartz problem 11.2.
2. **Mandelstam variables.** Schwartz problem 5.6.
3. **Møller scattering.** Schwartz problem 13.1. Hint: there are two diagrams, which must be added together coherently before squaring the amplitude. You will find the Mandelstam variables from problem 2 very useful! There is a relative minus sign between the two diagrams, which you can read about in Schwartz section 13.1.1 if you've taken QFT.