Problem 1: Starting with eqs. 8.43 in Halzen-Martin, explain the Bjorken scaling discussed in section 9.1, and thereby do the needed manipulations to write the scattering cross section in terms of $F_1, F_2$ and thus finally in terms of the parton distribution functions $f_i(x)$. [In the process derive the relations between $F_1$, and $F_2$, carry out the needed delta-function integrals etc.]

Problem 2: Halzen-Martin 6.19