QFT II (Kreimer, Summer 2014)

Exercise IV (June 04 2014, to be handed in June 16 2014)

1.(20 points)
Find all connected graphs contributing to the vertex function in QED up to two loops.

2.(20 points)
Show that their sum vanishes (on the level of integrands) when you put the external fermions on-shell and contract the external photon with its momentum.