

## QFT 1. Series 5.

**Exercise 1:** In Yukawa theory find all possible one loop diagrams for

- a) fermion-anti fermion annihilation.
- b) fermion-anti fermion scattering.
- c) fermion-fermion scattering.

**Exercise 2:** For all diagrams in exercise 1 write the possible contractions and use the Feynman rules to find their corresponding values (do not miss the minus signs).

**Exercise 3:** Solve exercises 4.2, 4.3 and 4.4 in the text book.