Quantum field theory Exercises 13. 2006-04-24

• Exercise 13.1.

In the theory of a scalar field ϕ with mass *m* and quartic interaction $\mathscr{L}_{int} = -\frac{\lambda}{4!}\phi^4$ calculate the amplitude for $2\rightarrow 2$ scattering up to the order λ^2 (i.e. in one loop). Use subtraction at zero momenta to get the finite result.