

Week 6 (due Nov. 13)

1. Problem 10.3 in Srednicki (10 pts).
2. Problem 10.4 in Srednicki (10 pts). (Hint: you can figure out the momentum -space Feynman rule for the vertex by computing the contribution of \mathcal{L}_1 to the 3-point Green's function to leading order in g . This can be done by first rewriting \mathcal{L}_1 in terms of Fourier-transformed fields and then applying Wick theorem in momentum space.)
3. Problem 10.5 in Srednicki (20 pts).