Homework assignment 1: Model non-interacting Hamiltonians

(Dated: January 9, 2020)

- Problem 1: Jordan-Wigner transformation

  Exercise 4.1 from Coleman' textbook

- Problem 2: Tight binding Hamiltonian on square lattice

  Exercise 4.3 from Coleman' textbook

- Problem 3: Tight binding Hamiltonian on honeycomb lattice: spectrum of graphene

  Exercise 4.4 from Coleman' textbook