Physics 123B: Homework 3

due January 30, 4pm to Amanda Jones in Kohn Hall 1220 or by email to Prof. Balents

1. **IQHE:**
   Assuming a 2d electron gas with fixed 2d electron density n and mass m, and assuming all electrons are spin polarized (i.e. they are all spin up), find the sequence of magnetic fields B_k, such that exactly k Landau levels are filled, with integer k. These fields correspond to the centers of plateaus in the IQHE.