This homework is primarily a reading assignment: Jeffrey A. Harvey's lecture notes on *Magnetic Monopoles, Duality, and Supersymmetry.* Lectures 1 and 2 should be fairly easy, so please focus on the harder lectures 3, 4, and 5. Skip lecture 6 for now — this material is not germane to this class. (Although it's rather interesting on its own right, so you might want to read lecture 6 when you have more time — or when your own research encounters the multi-monopole moduli spaces.)

Just for fun, here is a *simple* exercise: Prove the Bogomolny–Prasad–Sommerfeld bound $M \geq v|Q + i\mu|$ for dyons with both electric and magnetic charges.