MA 310 — Homework #7

Due Monday, March 9, in class

1. Let $f(n) = 1^3 + 2^3 + 3^3 + \cdots + n^3$.

   (a) Use the methods in class to guess a closed formula for $f(n)$. (Do NOT simply look it up!) Simplify it as much as possible.

   (b) Now prove your formula by induction on $n \geq 1$.