

**Homework Assignment #6**  
**Due: October 5, 9:30 a.m.**

1. Come up with a formula for  $\sum_{i=1}^n i^3$ , and show it is correct. (Hint: remember how we showed  $\sum_{i=1}^n i^2 = \frac{n(2n+1)(n+1)}{6}$  in class.)
2. Give a formula for  $\sum_{i=1}^n \sum_{j=i}^{2i} (2j + 1)$  and show your answer is correct.