CS180 Fall 19 Homework 1

Assigned 10/2, LATEST due date Wednesday 10/9 by 9:59 am or earlier

All algorithms/proofs should be in bullet form: step by step.

1. Exercise 3, Page 22
2. Exercise 4, on Page 22
3. Exercise 6 on page 25
4. Exercise 4 on page 67
5. (a) Prove (by induction) that sum of the first n integers $(1 + 2 + ... + n)$ is $n(n + 1)/2$
   (b) What is $1^3 + 2^3 + 3^3 + ... + n^3 = ??$ Prove your answer by induction.
6. How many tries do you need (in the worst case) in the two egg problem when there are 200 steps? what about n steps?