CSC236 Week 2 Tutorial:

Simple Induction

Slides Credit: Charlene Chu

Prove by simple induction that $\forall n \geq 1, \sum_{k=1}^{n} k^3 = \frac{n^2(n+1)^2}{4}$.

Exercise 1

Prove that for all $n \in \mathbb{N}$, every set of size n has exactly 2^n subsets.

Exercise 2

Assume you have an unlimited supply of 3¢ and 4¢ stamps. Prove that every amount greater than or equal to 6¢ can be made using 3¢ and 4¢ stamps.