

Homework 9
CS 313H

The important issue is the logic you used to arrive at your answer.

1. By induction, prove that $\sum_{i=0}^n i^2 = \frac{n(n+1)(2n+1)}{6}$ for $n \geq 0$. (Make sure you begin by stating the inductive predicate $P(n)$.)

2. By induction, prove that $n < 2^n$ for $n \geq 1$. (Make sure you begin by stating the inductive predicate $P(n)$.)

3. By induction, prove that postage of six cents or more can be achieved (exactly) using two and seven cent stamps. (Make sure you begin by stating the inductive predicate $P(n)$.)