

Quiz 0
CMP 761: Analysis of Algorithms
3 September 2002

Name: _____

Student ID (Social Security Number): _____

Write your answer to each on a separate piece of paper. Staple your answer sheets to this sheet when you turn in the quiz.

1. Prove for all natural numbers n that:

$$\sum_{i=1}^n i = \frac{n(n+1)}{2}$$

2. Write (in pseudo-code) an algorithm that sorts a list of n numbers.

(More formally, design an algorithm for the following:

Input: A sequence of n numbers $\{a_1, a_2, \dots, a_n\}$.

Output: A reordering $\{a'_1, a'_2, \dots, a'_n\}$ of the input sequence such that $a'_1 \leq a'_2 \leq \dots \leq a'_n$.)