

Name (PRINTED): _____

Student ID #: _____

Section # (or TA's: _____
name and time)

CMSC 250
0201 & 0202

Quiz #9

Wednesday, Oct. 26, 2005

Write all answers legibly in the space provided. The number of points possible for each question is indicated in square brackets – the total number of points on the quiz is 30, and you will have exactly 15 minutes to complete this quiz. You may not use calculators, textbooks or any other aids during this quiz.

1. [15 pnts.] If the following statement is true, use induction to prove that it is true, or if it is false, give a specific counter example with justification to prove that it is false.

$$\forall n \in \mathbb{Z}^{\geq 1}, \sum_{i=1}^n (5i - 4) = \frac{n(5n - 3)}{2}$$

2. [15 pnts.] If the following statement is true, use induction to prove that it is true, or if it is false, give a specific counter example with justification to prove that it is false.

$$\forall n \in \mathbb{Z}^{\geq 0}, 1 + 3n \leq 4^n$$