BRONX COMMUNITY COLLEGE
of the City University of New York
DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE

CSI35 Section D02   **Sample Quiz 1**

Instructions

Solve all problems and mark your answers clearly. Show all work, using additional paper if needed.

1. Define $n!$ recursively, for all positive integers n.

2. Prove, by mathematical induction, that $1 \cdot 1 + 2 \cdot 2 + \ldots + n \cdot n! = (n+1)! - 1$, for all positive integers n.

3. Define $m \cdot n$, for positive integers m, n recursively on n.