

Name \_\_\_\_\_ UIN \_\_\_\_\_

**Quiz 1**  
CPSC 411 Spring 2009

**Problem 1** (2 points)

State the definition of  $f(n) \in O(g(n))$  for some functions  $f, g: \mathbf{Z} \rightarrow \mathbf{R}$  (assuming that the argument  $n$  approaches  $\infty$ , as usual).

**Problem 2** (1 point)

True or false. Is  $4n^2 + 2n + 4 \in O(n^2 + n + 1)$ ?

**Problem 3** (2 points)

What is the divide-and-conquer paradigm?