Name (Last, First): _____   Student ID: _____

Quiz 11 on April 7, 2016: "Consider Extreme Cases" and "Generalize". You have 28 minutes to solve the following two problems. Please write on both sides of the page.   **Good Luck!**

Problem 1. (Larson's 1.11.7). Show that there exists a rational number c/d, with $d < 100$, such that $\lfloor k\frac{c}{d} \rfloor = \lfloor k\frac{73}{100} \rfloor$ for $k = 1, 2, \ldots, 99$.

Problem 2 Evaluate the sum $\displaystyle\sum_{k=0}^{\infty} \frac{(k+1)^2}{k!}$.