Left Neighbor: _____   Right Neighbor: _____

Name: _____   Student ID: _____

Section TA: _____

This is a closed book quiz

For the questions below, assume $F_0 = 0$, $F_1 = 1$, and $F_n = F_{n-1} + F_{n-2}$.

1. (**3 points**) prove that $F_n < 2^n$ by induction on n.

2. (**7 points**) prove that $\sum_{i=1}^{n} F_i = F_{n+2} - 1$ by induction on n.