Illinois Institute of Technology
Department of Computer Science

CS 330 Discrete Structures

Fall Semester, 2010

Quiz 6

In Class

1. (a) Find a recurrence relation for the number of ways to climb n stairs if the person climbing the stairs can take one, two, or three stairs at a time.
   (b) What are the initial conditions?
   (c) How many ways can this person climb a flight of eight stairs?
2. (a) Find all solutions of the recurrence relation $a_n = -5a_{n-1} - 6a_{n-2} + 42 \cdot 4^n$.
   (b) Find the solution of this recurrence relation with $a_1 = 56$ and $a_2 = 278$.