

Homework 1: Many Campers Sort Piles

*Week 4**Mathcamp 2012*

Attempt all of the problems that seem interesting, and let me know if you see any typos! (+) problems are harder than the others. (++) problems are currently open.

1. Take the following lists, and apply beadsort and bubblesort to put them in the right order:
 - (4, 3, 2, 1).
 - (1, 1, 2, 3, 5, 8, 1, 3).
 - (1, 2, 8, 4, 5, 9).
2. Bogosort the list (3, 4, 2, 1). How many tries did this take you?
3. Create an algorithm to win or tie at Tic-Tac-Toe.
4. Create an algorithm that takes as input any configuration of chess pieces on a chess-board along with a player's turn, and outputs which player will win if both play perfectly. (Hint: this does not need to be a particularly fast algorithm. In fact, it probably needs to be insanely slow.)