

Homework 2

Question 1: Page $I - 13$ of Ferguson, question 6: staircase nim.

Question 2: Page $I - 13$ of Ferguson, question 7: Moore's nim_k .

Question 3: Recall from lectures that the subtraction game with subtraction set $\{a_1, \dots, a_m\}$ is that game in which a position consists of a pile of chips, in which a legal move is to remove from the pile a_i chips, for some $i \in \{1, \dots, m\}$. Find the Sprague-Grundy function for the subtraction game with subtraction set $\{1, 2, 4\}$.