Recursive Definitions

Given below are the required problems for this assignment. Please submit your answers on a printed copy of this sheet.

(1) Let $f_n$ denote the $n$-th Fibonacci number. Show that

$$f_0 - f_1 + f_2 - f_3 + \cdots - f_{2n-1} + f_{2n} = f_{2n-1} - 1.$$
(2) Write pseudocode for a recursive implementation of binary search. (You may add extra parameters to your function if it makes the recursion easier.)