CSE230 Fall 2021 Assignment 4

Recursion

December 28, 2021

Deadline: Jan 6, 2022 11:59pm

1. Let, $a_1 = 3$, $a_2 = 4$ and for $n \geq 3$, $a_n = 2a_{n-1} + a_{n-2}$, express a_n in terms of n.

2. Let, $a_1 = 3$, $a_2 = 4$ and for $n \geq 3$, $a_n = 2a_{n-1} + a_{n-2} + 5$, express a_n in terms of n.

3. Let, $a_1 = 3$, $a_2 = 4$ and for $n \geq 3$, $a_n = 2a_{n-1} + a_{n-2} + n^2 + 1$, express a_n in terms of n.

4. Let, $a_1 = 1$, $a_2 = 2$, $b_1 = 0$, $b_2 = 1$,

for $n \geq 3$,

$a_n = 2a_{n-1} + b_{n-1}$

for $n \geq 2$

$b_n = b_{n-1} + a_{n-1}$

express a_n in terms of n.