
Math 4363 - Combinatorics
Homework 7
Due in Class - Tuesday 7 May 2019

1. Solve the non-homogeneous recurrence relation

$$h(n) = 4h(n-1) + 4^n$$

with initial value $h(0) = 3$.

2. Solve the non-homogeneous recurrence relation

$$h(n) = 4h(n-1) + 3 \cdot 2^n$$

with initial value $h(0) = 1$.

3. Solve the non-homogeneous recurrence relation

$$h(n) = 3h(n-1) - 2$$

with initial value $h(0) = 1$.

4. Solve the non-homogeneous recurrence relation

$$h(n) = 2h(n-1) + n$$

with initial value $h(0) = 1$.

5. Solve the non-homogeneous recurrence relation

$$h(n) = 6h(n-1) - 9h(n-2) + 2n$$

with initial values $h(0) = 1$ and $h(1) = 0$.