Chapter 7

33. Solve the recurrence relation $h_n = h_{n-1} + 9h_{n-2} - 9h_{n-3}, \quad (n \geq 3)$ with initial values $h_0 = 0, h_1 = 1$, and $h_2 = 2$.

34. Solve the recurrence relation $h_n = 8h_{n-1} - 16h_{n-2}, \quad (n \geq 2)$ with initial values $h_0 = -1$ and $h_1 = 0$.

37. (bonus)

    Determine a recurrence relation for the number a_n of ternary strings (made up of 0s, 1s, and 2s) of length n that do not contain two consecutive 0's or two consecutive 1s. Then finda formula for a_n

38. Solve the following recurrence relations by examining

    (b)

40.

41. (grad)

44.

45.

Chapter 8

Do two of 1,2 or 36

1.

2.

3.

4.

36.