

1. Solve: $a_n = 10a_{n-1} - 25a_{n-2}$, $a_0 = 3$, $a_1 = 4$.

2. Solve the recurrence relation $a_n = 3a_{n-1} + 2^n$, with initial condition $a_0 = 2$.

3. Solve the recurrence relation $a_n = 8a_{n-1} - 12a_{n-2} + 3n$, with initial conditions $a_0 = 1$ and $a_1 = 5$.

4. What is the form of the solution of the nonlinear recurrence relation $a_n = 6a_{n-1} - 9a_{n-2} + F(n)$ when $F(n) = n^2 2^n$?