10. (a) Find the general solution of the recurrence relation $3x_{n+2} - x_{n+1} - 2x_n = 0$. [4]

(b) Find the general solution of the recurrence relation $3x_{n+2} - x_{n+1} - 2x_n = 5$. [4]

(c) Solve the recurrence relation $3x_{n+2} - x_{n+1} - 2x_n = 5$ given that $x_0 = 1$ and $x_1 = 7$. [2]