

EE23BTECH11047 - Deepakreddy P

EXERCISE 9.1

4 Write the first five terms of the sequence whose nth term is $\frac{2n-3}{6}$ and obtain the Z transform of the series

Solution:

$$x(n) = \frac{2n-1}{6} (u(n)) \quad (1)$$

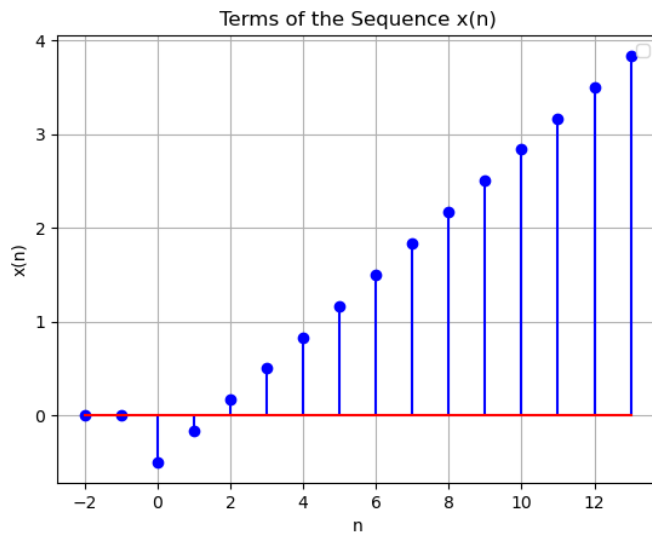


Fig. 1. Plot of x(n) vs n

$$X(z) = \frac{3z^{-1} - 1}{6(1 - z^{-1})^2} \quad \{z \in \mathbb{C} : z \neq 1\} \quad (2)$$