

NCERT Discrete

Pragnidhved Reddy
EE23BTECH11050

Question 10.5.2.8:

An AP consists of 50 terms of which 3rd term is 12 and the last term is 106. Find the 29th term.

Solution :

Parameter	Value	description
$x(0)$	6	First term
d	2	common difference
$x(n)$	$[x(0) + 2n]u(n)$	general term

TABLE I
INPUT PARAMETERS

In this AP we can tell that $x(0)=6$.

Therefore, $x(n)=6+2n$.

$$X(z) = \frac{6 - 8z^{-1}}{(1 - z^{-1})^2} \quad z > 1$$

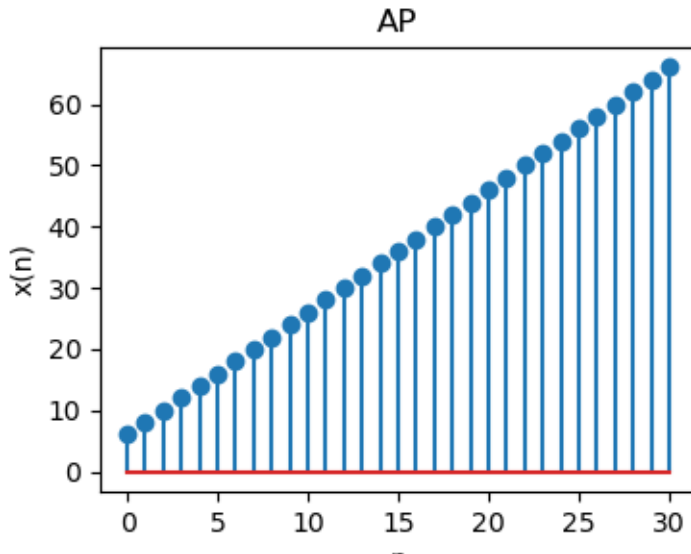


Fig. 1. graph of the given AP