10.5.2.14

EE23BTECH11003 - pranav

Question: no of multiples of 4 between 10 and 250
let $4n_1$ and $4n_2$ be the first and last multiples of 4 between 10 and 250 then

$4n_1 > 10$ & $4n_2 < 250$
$\implies n_1 > 10/4$ & $n_2 < 250/4$
$\therefore n_1$ & $n_2 \in \mathbb{N}$
$\implies n_1 = 3$ $n_2 = 62$
$\therefore$ no of multiples of 4 between 10 and 250 are $62 - 3 + 1 = 60$
considering the series to start from $n = 0$ the general term

$$S(n) = S(0) + n \cdot d \tag{1}$$
$$S(n) = 12 + 4 \cdot n \tag{2}$$

Variable	Description	Value
$S(0)$	First term of the AP	12
d	Common difference of the AP	d
$S(n)$	General term of the AP	$12 + 4 \cdot n$

TABLE I: Variables Used

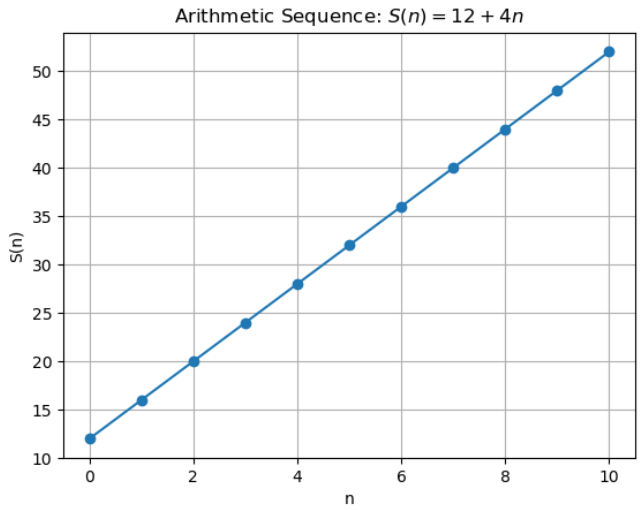

Fig. 1: general term of the AP