



Brush sir

Arithmetic Progression

Std X

- ① If the ratio of the Sum of first n terms of two A.P.'s ~~are~~ is $(7n+1) : (4n+27)$, find the ratio of their n^{th} terms.
- ② Find the Sum of the following Series:
 $5 + (-41) + 9 + (-39) + 13 + (-37) + 17 + \dots + (-5) + 81 + (-3)$.
 Ans: 420
- ③ If S_n denotes the Sum of the first n terms of an A.P., Prove that $S_{30} = 3(S_{20} - S_{10})$.
~~Ans: 420~~
- ④ The houses in a row are numbered consecutively from 1 to 49. Show that $\exists$ a value of x such that Sum of numbers of houses preceding the house numbered x is equal to Sum of the numbers of houses following x .
 Find the value of x .
 Ans: 35
- ⑤ If the ratio of the 11th term of an A.P. to its 18th term is $2:3$, find the ratio of the Sum of the first five terms to the Sum of its first 10 terms.
- ⑥ If the m^{th} term of an A.P. is $\frac{1}{n}$ & n^{th} term is $\frac{1}{m}$, then show that its $(mn)^{\text{th}}$ term is 1.
- ⑦ If the Sum of m terms of an A.P. is the same as the Sum of its n terms, Show that the Sum of $(m+n)$ terms is zero.
- ⑧ Find the Sum of all two digit nos. which when divided by 3 yield 1 as remainder. Ans: 1605
- ⑨ For what value of p are $2p+1, 13, 5p-3$, three consecutive terms of A.P.?
- ⑩ If 18, $a, b, -3$ are in A.P., then find $(a+b)$.
 Ans: 15.