- If 'a' is the first term and 'd' is the common difference of the arithmetic progression, then its n^{th} term is given by $a_n = a+(n-1)d$.
- The sum, S_n of the first 'n' terms of the A.P. is given by $S_n = n/2\ [2a + (n-1)d]$.
- If S_n is the sum of n terms of an A.P. whose first term is 'a' and last term is 'l', $S_n = (n/2)(a + l)$.
- If common difference is d, number of terms n and the last term *l*, then $S_n = (n/2)[2l-(n - 1)d]$.
- If a fixed number is added or subtracted from each term of an A.P., then the resulting sequence is also an A.P. and it has the same common difference as that of the original A.P.
- If each term of A.P is multiplied by some constant or divided by a non-zero fixed constant, the resulting sequence is an A.P. again.
- If $a_1, a_2, a_3, \ldots, a_n$ and $b_1, b_2, b_3, \ldots, b_n$, are in A.P. then $a_1+b_1, a_2+b_2, a_3+b_3, \ldots\ldots, a_n+b_n$ and $a_1–b_1, a_2–b_2, a_3–b_3, \ldots\ldots, a_n–b_n$ will also be in A.P.
- Suppose $a_1, a_2, a_3, \ldots\ldots, a_n$ are in A.P. then $a_n, a_{n–1}, \ldots\ldots, a_3, a_2, a_1$ will also be in A.P.
- If n^{th} term of a series is $t_n = An + B$, then the series is in A.P.
- If $a_1, a_2, a_3, \ldots\ldots, a_n$ are in A.P., then $a_1 + a_n = a_2 + a_{n–1} = a_3 + a_{n–2} = \ldots\ldots$ and so on.
- In order to assume three terms in A.P. whose sum is given, they should be assumed as a-d, a, a+d.
- Four terms of the A.P. whose sum is given should be assumed as a-3d, a-d, a+d, a+3d
- Five convenient numbers in A.P. a–2b, a–b, a, a+b, a+2 b.
- In general, we take a – rd, a – (r – 1)d, …., a – d, a, a + rd in case we have to take (2r + 1) terms in an A.P.
- Likewise, any 2r terms of an A.P. should be assumed as: a – (2r-1)d,

  a – (2r – 3)d, …., a – d, a, a + d, …………. , a+(2r-3)d, a + (2r-1)d.

- The arithmetic mean of two numbers 'a' and 'b' is (a+b)/2.
- The terms $A_1, A_2, \ldots.. , A_n$ are said to be arithmetic means between a and b if $a, A_1, A_2, \ldots.. , A_n, b$ is an A.P.
- Clearly, 'a' is the first term, 'b' is the $(n+2)^{th}$ term and 'd' is the common difference. Then, we have $b = a+(n+2-1)d = a+(n+1)d$

  Hence, this gives 'd' = (b-a)/(n+1)