A very important concept $s_1 = a$, a lot of questions is asked on this concept so please read this sincerely

Concept: Let the sum of first n terms is $s_n = 6n^2 + 5n$, then $s_1 = a$ (first term).

Question 1: The sum of first n terms of a particular series is $s_n = 6n^2 + 5n$.
Solution: As per theorem if we put n = 1, then we get a (first term)
$s_n = 6n^2 + 5 \Rightarrow \quad s_1 = 6(1)^2 + 5 = 11$

Question 2: The sum of first n terms of a particular series is $s_n = 2n^2 - n$. If its common difference is 4, find the 3rd term ?
Solution: As per theorem if we put n = 1, then we get a (first term)
Thus, $s_n = 2n^2 - n \Rightarrow s_1 = 2(1)^2 - 1 = 1$
$t_n = a + (n - 1) d \Rightarrow t_3 = 1 + (3 - 1) 4 = 9$

Question 3: The sum of first n terms of a particular series is $s_n = 4n^2 + 3n$. Find the 6th term ?
Solution: As per theorem if we put n = 1, then we get a (first term)
Thus, $s_n = 4n^2 + 3n \Rightarrow s_1 = 4(1)^2 + 3(1) = 7$
Now the common difference (d) will be equal to double the coefficient of n^2 that is 8.
Now we find t_6
$t_n = a + (n - 1) d \Rightarrow t_6 = 7 + (6 - 1) 8 = 47$

Question 4: The sum of first n terms of a particular series is $s_n = n^2 + 3n$. Find the 30th term ?

Solution: As per theorem if we put $n = 1$, then we get a (first term)

Thus, $s_n = n^2 + 3n \Rightarrow s_1 = (1)^2 + 3(1) = 4$

Now the common difference (d) will be equal to double the coefficient of n^2 that is 2.

Now we find t_{30}

$t_n = a + (n - 1) d \Rightarrow t_{30} = 4 + (30 - 1) 2 = 62$

Question 5: The sum of first n terms of a particular series is $s_n = 2n^2 + 5n$. Find the nth term ?

Solution: As per theorem if we put $n = 1$, then we get a (first term)

Thus, $s_n = 2n^2 + 5n \Rightarrow s_1 = 2(1)^2 + 5(1) = 7$

Now the common difference (d) will be equal to double the coefficient of n^2 that is 4.

Now we find t_{30}

$t_n = a + (n - 1) d \Rightarrow t_n = 7 + (n - 1) 4 = 4n + 3$

Question 6: The sum of first n terms of a particular series is $s_n = 3n^2 + 4n$. Find the sum of the first 10 terms ?

Solution: In this case we put $n = 10$, in s_n

Thus sum of first 10 terms $s_{10} = 3(10)^2 + 4(10) = 340$