1. Find the 10th term of the AP: 2, 7, 12, 17....

Sol: From the given AP, a = 2, d = 5, n = 10.

 $\mathbf{a}_{\mathbf{n}} = a + (n-1)d$

 $a_{10} = 2 + (10 - 1) \times 5 = 47.$

Therefore the 10th term of the given AP is 47.

2. Which term of the AP: 21, 18, 15.... is -81?

Sol: From the given AP, a = 21, d = -3, $a_n = -81$

We are supposed to find *n*.



Therefore the 35th term of the AP is -81.

Sum of First *n* Terms of an AP:

The sum of first *n* terms of an AP is given by: $S = \frac{n}{2} [2a + (n-1)d]$ where *a* is the first term and *d* is the common difference.

The formula can also be written as:

$$S = \frac{n}{2} [a + a + (n-1)d] = \frac{n}{2} [a + a_n]$$
 where a_n is the n^{th} term of the AP.