

Module - 22.5: Practice Problems

N-bonacci series is a series where the 1st n numbers in the series are all 1-s and after that the i -th number is the sum of the previous n numbers in the series.

For example, for $n = 4$, the series looks like this:

1, 1, 1, 1, 4, 7, 13, 25, 49, 94, 181, 349, 673, 1297 . . .

You will be given two integers n and k . You have to determine the k -th integer (**1-indexed**) in the N-bonacci series.

For example, for $n = 4$ and $k = 8$ the output is 25

- a. Define your DP state
- b. Write the recurrence relation
- c. Write the base case
- d. Write code in C++ (use both **memoization** and **tabulation**)
- e. Write your time and space complexity