

ANNUAL AUBG PROGRAMMING CONTEST

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Task 2. Counting

Given is a table with m rows and n columns. Different letters are written in cells of the table. We can start at any cell and we can go to an adjacent cell, which is located above, below, left or right. Then we can make next steps in the same way. We cannot leave the table, but we can return to a cell already visited. Thus we may subsequently visit s cells and write a string of characters that are in these cells in the order we visited them. Write program **count** that computes how many different strings we can write.

Input: Integers m , n and s , separated by spaces.

Output: One integer equal to the found count.

Constraints: $1 < m < 6$, $1 < n < 6$, $1 < s < 30$.

Example

Input

2 2 3

Output

16

Explanation: Let the letters be written as is shown:

a	b
c	d

All possible strings are: aba, abd, aca, acd, bab, bac, bdb, bdc, cac, cab, cdc, cdb, dca, dcd, dba, dbd.