
Counting cool words

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In this problems, we say that a word is cool if it does not have two consecutive consonants. Write a program to compute how many words with n lowercase letters, v of which are vowels, are cool.

For instance, these are some of the many cool words for $n = 5$ and $v = 3$:

aabab ababa babaa toiep zeyui

Remember that there are 5 vowels and 21 consonants.

Input

Input consists of several cases, each with two natural numbers $1 \leq n \leq 15$ and $0 \leq v \leq n$.

Output

For every case, print the number of cool words with n lowercase letters, v of which are vowels. This number is always smaller than 10^{18} .

Sample input 1	Sample output 1
1 0 1 1 2 0 2 1 2 2 3 0 3 1 3 2 3 3 5 3 15 9 15 6 15 15	21 5 0 210 25 0 2205 1575 125 330750 35177510566406250 0 30517578125