
Counting cool words

P67933_en

Examen parcial d'Algorísmia, FME (2010-10-26)

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 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
```

Sample output

```
21
5
0
210
25
0
2205
1575
125
330750
35177510566406250
0
30517578125
```

Problem information

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