**Computer Transformation**

**Time Limit: 2000/1000 MS (Java/Others)    Memory Limit: 65536/32768 K (Java/Others)  
Total Submission(s): 6250    Accepted Submission(s): 2267**

**Problem Description**

A sequence consisting of one digit, the number 1 is initially written into a computer. At each successive time step, the computer simultaneously tranforms each digit 0 into the sequence 1 0 and each digit 1 into the sequence 0 1. So, after the first time step, the sequence 0 1 is obtained; after the second, the sequence 1 0 0 1, after the third, the sequence 0 1 1 0 1 0 0 1 and so on.   
  
How many pairs of consequitive zeroes will appear in the sequence after n steps?

**Input**

Every input line contains one natural number n (0 < n ≤1000).

**Output**

For each input n print the number of consecutive zeroes pairs that will appear in the sequence after n steps.

**Sample Input**

2

3

**Sample Output**

1

1

**Source**

[Southeastern Europe 2005](http://acm.hdu.edu.cn/search.php?field=problem&key=Southeastern+Europe+2005&source=1&searchmode=source)

**Recommend**

JGShining   |   We have carefully selected several similar problems for you:  [1143](http://acm.hdu.edu.cn/showproblem.php?pid=1143) [1200](http://acm.hdu.edu.cn/showproblem.php?pid=1200) [1196](http://acm.hdu.edu.cn/showproblem.php?pid=1196) [1163](http://acm.hdu.edu.cn/showproblem.php?pid=1163) [1100](http://acm.hdu.edu.cn/showproblem.php?pid=1100)