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The Virtual Learning Environment for Computer Programming

Some sequences of bits (1)

Write a program that prints the number of sequences of length *n* made up of only zeros and ones that do not contain two consecutive zeros nor three consecutive ones.

For instance, there are 7 sequences for n = 5:

 $01010 \quad 01011 \quad 01101 \quad 10101 \quad 10110 \quad 11010 \quad 11011$

Sample output

Input

Input consists of several natural numbers *n*, each between 0 and 150.

Output

For every *n*, print the required number.

Sample input

our pro mp ut	
0	1
1	2
2	3
3	4
5	7
150	3495391431926239764

Problem information

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