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The Virtual Learning Environment for Computer Programming

Some sequences of bits (1)
P81826_en
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 $n=5$ :

$$
\begin{array}{lllllll}
01010 & 01011 & 01101 & 10101 & 10110 & 11010 & 11011
\end{array}
$$

## Input

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

## Output

For every $n$, print the required number.

| Sample input | Sample output |
| :--- | :--- |
| 0 | 1 |
| 1 | 2 |
| 2 | 3 |
| 3 | 4 |
| 5 | 7 |
| 150 | 3495391431926239764 |

## Problem information

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