1605. Devil's Sequence

Time limit: 0.5 second
Memory limit: 64 MB

Robodevil likes to do some mathematics between rehearsals of his orchestra. Today he invented devilish sequence No. 1729:

- $x_0 = 0$,
- $x_1 = 1$,
- $x_n = (x_{n-1} + x_{n-2}) / 2$.

For example, $x_{10} = 0.666015625$. Robodevil became interested at once how many sixes there were at the beginning of an arbitrary x_n. In 6 nanoseconds, he had a formula. Can you do the same?

Input

You are given an integer n; $2 \le n \le 100000$.

Output

Output the number of sixes at the beginning of x_n in decimal notation.

Sample

input	output
10	3

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