LOGIC

Given a sequance of natural numbers.

Find N'th term of this sequence.

a1=2, a2=4, a3=11, a4=36, a5=147, a6=778 ... ... aN.

Input

Only one natural number 7<=N<20.

Output

One natural number. N'th term of the sequence.

Example

Input:
10
Output:
3629814