

Pentagonal and Fibonacci number sequences

Consider the Pentagonal and Fibonacci number sequences. For each integer x , it exists two integers, $nPenta$ and $nFibo$ such that each satisfies the sequence proposed for the xth term. Given the integer x , your task is to calculate the product of the sum of the first x terms of both sequences.

Input

One test case with an integer x ($1 \leq x \leq 200$) in a single line.

Sample Input

10

Output

Given the integer x , write the product of the sum of Pentagonals's and Fibonacci's first x terms in a single line.

Sample Output

48400