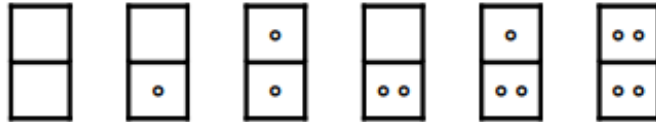


DOMINO

Dominoes are gaming pieces used in numerous tile games. Each domino piece contains two marks. Each mark consists of a number of spots (possibly zero). The number of spots depends on the set size. Each mark in a size **N** domino set can contain between 0 and **N** spots, inclusive. Two tiles are considered identical if their marks have the same number of spots, irregardless of reading order. For example tile with 2 and 8 spot marks is identical to the tile having 8 and 2 spot marks. A proper domino set contains no duplicate tiles. A **complete** set of size **N** contains all possible tiles with **N** or less spots and no duplicate tiles. For example, the complete set of size 2 contains 6 tiles:



Write a program that will determine the total number of spots on all tiles of a complete size **N** set.

Input

The first and only line of input contains a single integer, **N** ($1 \leq \mathbf{N} \leq 1000$), the size of the complete set.

Output

The first and only line of output should contain a single integer, total number of spots in a complete size **N** set.

Example

Input1:

2

Output1:

12

Input2:

3

Output2:

30

Input3:

15

Output3:

2040