Problem F
Final Ranking

This year, due to the COVID-19 situation in Vietnam, The ICPC Vietnam National Contest will be held after 3 months of delay. Being the host of the contest, all the students of FPT university want to qualify for their teams and to represent their university in the contest. They worked very hard to sharpen their problem-solving skills. FPT University's coach organized a series of individual contests to prepare his n students and to be able to select the best team. After all contests, the rank of a contestant equals *the number of contestants that have higher score* plus 1. This is an example of a final ranking.

Rank	Contestant	Score
1	A	100
2	B	90
2	C	90
4	D	88

Looking at only the ranking column, we can see that this column will be a non-decreasing sequence of n integers and has some interesting attributes. Your task is to count the number of possible ranking sequences. Please note that two sequences A and B are considered different iff there exists a position i where $A_i \neq B_i$.

Input

The input contains a single integer n ($1 \leq n \leq 50$).

Output

The output should contain the number of possible ranking sequences.

Explanation of the sample

The ranking of 3 students could be one of the following scenarios:

- `1 1 1` Three students have the same score;

- `1 1 3` Two students tied for the highest score and they are better than the third student;

- `1 2 2` One student has the highest score, the other two have the same score;

- `1 2 3` Three students have different scores.

Sample Input 1	Sample Output 1
3	4