

# Sjecista

**Problem ID:** sjecista

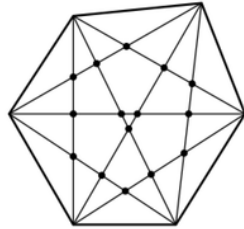
**CPU Time limit:** 1 second

**Memory limit:** 1024 MB

**Difficulty:** 2.0

Consider a convex polygon with  $N$  vertices, with the additional property that no three diagonals intersect in a single point. Find the number of intersections between pairs of diagonals in such a polygon.

The figure below shows one such polygon with 6 vertices.



Note that a polygon is convex if all of its interior angles are less than 180 degrees.

## Input

The first and only line of input contains a single integer  $N$ ,  $3 \leq N \leq 100$  denoting the number of vertices.

## Output

Output the number of intersections on a single line.

### Sample Input 1

3

### Sample Output 1

0

### Sample Input 2

4

### Sample Output 2

1

### Sample Input 3

6

### Sample Output 3

15

**Source:** Croatian Open Competition in Informatics 2006/2007, contest #2

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