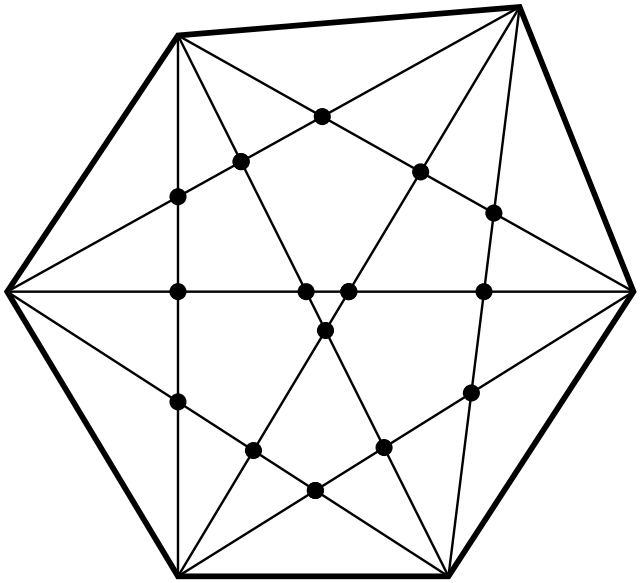
COCI '06 Contest 2 #4 Sjecišta

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

Input Specification

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

Output Specification

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
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