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.

Input.

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

Output.

Output the number of intersections on a single line.

Sample tests.

N	stdin	stdout
1	4	1
2	6	15

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