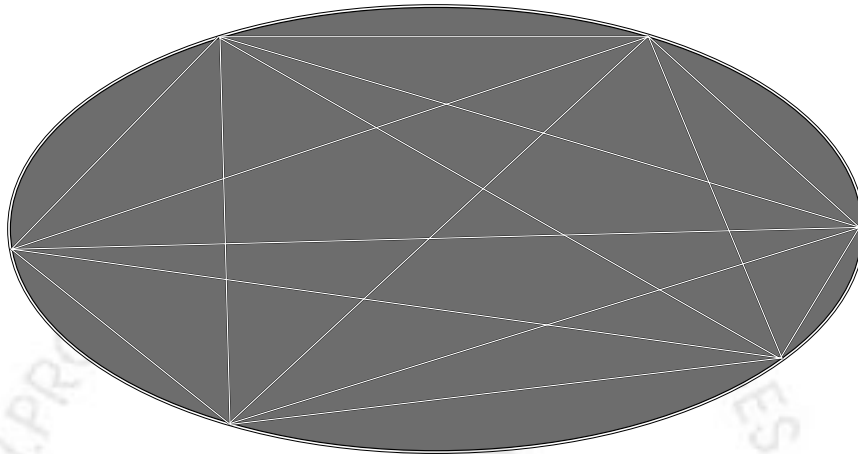


110602 How Many Pieces of Land?

You are given an elliptical-shaped land and you are asked to choose n arbitrary points on its boundary. Then you connect each point with every other point using straight lines, forming $n(n-1)/2$ connections. What is the maximum number of pieces of land you will get by choosing the points on the boundary carefully?



Dividing the land when $n = 6$.

Input

The first line of the input file contains one integer s ($0 < s < 3,500$), which indicates how many input instances there are. The next s lines describe s input instances, each consisting of exactly one integer n ($0 \leq n < 2^{31}$).

Output

For each input instance output the maximum possible number pieces of land defined by n points, each printed on its own line.

Sample Input

4
1
2
3
4

Sample Output

1
2
4
8