Problem C. Counting Orthogonal Pairs

Input file:	*standard input*
Output file:	*standard output*
Time limit:	1 second
Memory limit:	1024 mebibytes

A regular polygon with n vertices has n edges and $\frac{n(n-1)}{2} - n$ diagonals. Consider the set of all these items. It contains $\frac{n(n-1)}{2}$ line segments.

Calculate how many pairs of segments from this set satisfy the following conditions:

- the segments have a common endpoint (which is a vertex of the regular polygon),
- the segments are orthogonal.

Input

The first line of input contains an integer t: the number of test cases ($3 \le t \le 10^5$).

Each of the following t lines contains an integer n: the number of vertices in the regular polygon ($3 \le n \le 10^9$).

Output

For each test case, print the answer on a separate line.

Example

standard input	*standard output*
3 5 4 10836006	0 4 58709502180012