L. BALANCED TRIPLE

Time Limited : 1 seconds

Problem description

There are n teams participate in a contest. There is exactly a match between each pair of teams (result in one team wins, other loses, no draw). A triple team (A, B, C) is balanced iff A wins B, B wins C and C wins A. Calculate the maximum of the number of balanced triple teams.

Input

The first line contains an integer T, denoting the number of test cases.

Each of T following line contains an integer n, denoting the number of teams in each test case.

Output

Each test case, print the maximum of the number of balanced triple teams in a single line.

Constraints

1 <= T <= 100000.

1 <= n <= 10^6.

Example

Input

3

3

4

5

Output

1

2

5