

## A. Candies and Two Sisters

time limit per test: 1 second

memory limit per test: 256 megabytes

input: standard input

output: standard output

There are two sisters Alice and Betty. You have  $n$  candies. You want to distribute these  $n$  candies between two sisters in such a way that:

- Alice will get  $a$  ( $a > 0$ ) candies;
- Betty will get  $b$  ( $b > 0$ ) candies;
- each sister will get some **integer** number of candies;
- Alice will get a greater amount of candies than Betty (i.e.  $a > b$ );
- all the candies will be given to one of two sisters (i.e.  $a + b = n$ ).

Your task is to calculate the number of ways to distribute exactly  $n$  candies between sisters in a way described above. Candies are indistinguishable.

Formally, find the number of ways to represent  $n$  as the sum of  $n = a + b$ , where  $a$  and  $b$  are positive integers and  $a > b$ .

You have to answer  $t$  independent test cases.

### Input

The first line of the input contains one integer  $t$  ( $1 \leq t \leq 10^4$ ) — the number of test cases. Then  $t$  test cases follow.

The only line of a test case contains one integer  $n$  ( $1 \leq n \leq 2 \cdot 10^9$ ) — the number of candies you have.

### Output

For each test case, print the answer — the number of ways to distribute exactly  $n$  candies between two sisters in a way described in the problem statement. If there is no way to satisfy all the conditions, print 0.

### Example

input
6 7 1 2 3 2000000000 763243547
output
3 0 0 1 999999999 381621773

### Note

For the test case of the example, the 3 possible ways to distribute candies are:

- $a = 6, b = 1$ ;
- $a = 5, b = 2$ ;
- $a = 4, b = 3$ .