

Problem C – The Red Wedding

At the [Red Wedding](#) at House Frey, every guests present in the hall room starts shaking hands with each other and [The Rains of Castamere](#) is playing as background music. Given the fact that any two persons shake hand exactly once, Can you tell the total count of handshakes?

Input Format

The first line contains the number of test cases **T**; **T** lines follow.

Each line then contains an integer **N**, the total number of guests in the Red Wedding.

Output Format

Print the number of handshakes for each test-case in a new line.

Constraints

$$1 \leq T \leq 1000$$

$$0 < N < 10^6$$

Sample Input

```
2
1
2
```

Sample Output

```
0
1
```

Explanation

Case 1 : The lonely guest shakes no hands, hence 0.

Case 2 : There are 2 guests, 1 handshake takes place.