Bunny

Description

Sean like to spend his free time on the popular computer game **Linecraft**. In the world of Linecraft, Sean has a farm consisting of n farmlands in a row. If we put the world on a number line, We can index these farmlands as number $1, 2, \ldots, n$.

In the newest update of Linecraft, a new creature **bunny** is added into the game. However, bunnies will jump through the farm. If a bunny stands on a farmland, the farmland will be trampled and become a dirtland.

Sean has learned some behavior about bunnies. A bunny will be spawned at a point $s < 1$. Every step it jumps to the right (positive direction of the number line) with a fixed length d. Eventually, the bunny will jump to a point $t > n$ and disappear. A bunny must not be able to jump through the farm in one step, i.e., $d \leq n$.

For example, consider $n = 10$ and a bunny starts at $s = -1$ and its jump length d is 3. After it jumps through, the farmlands $2, 5, 8$ will become dirtlands. A bunny starting at $s = -100$ with jump length $d = 3$ will cause exactly same result.

Sean wonders how many resulting status his farm will become if a bunny jumps through his farm.

Input

The first line contains a integer T indicating the total number of test cases. Each test case only contains an integer n, the number of farmlands in Sean's farm, in a line.

- $1 \leq T \leq 300$
- $2 \leq n \leq 10^9$

Output

For each test case, output the number of resulting status in a line.

Sample Input

```
3
2
3
4
```

Sample Output

```
3
5
8
```