

## 1278 – Sum of Consecutive Integers

Given an integer  $N$ , you have to find the number of ways you can express  $N$  as sum of consecutive integers. You have to use at least two integers.

For example,  $N = 15$  has three solutions,  $(1+2+3+4+5)$ ,  $(4+5+6)$ ,  $(7+8)$ .

### Input

Input starts with an integer  $T$  ( $\leq 200$ ), denoting the number of test cases.

Each case starts with a line containing an integer  $N$  ( $1 \leq N \leq 10^{14}$ ).

### Output

For each case, print the case number and the number of ways to express  $N$  as sum of consecutive integers.

Sample Input	Output for Sample Input
5	Case 1: 1
10	Case 2: 3
15	Case 3: 1
12	Case 4: 2
36	Case 5: 47
828495	