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 (≤ 200)**, denoting the number of test cases.

Each case starts with a line containing an integer **N (1 ≤ N ≤ 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 10 15 12 36 828495	Case 1: 1 Case 2: 3 Case 3: 1 Case 4: 2 Case 5: 47