

Team For ICPC

You are the coach of a competitive programming team preparing for the ICPC(I Can't Possibly Code) contest. The contest requires each team to solve a set of problems divided into three categories, each with a different difficulty level. You want to create teams of three students each, where the three students in each team will attempt the problems from one category each. You want to create as many teams as possible and ensure that each team is well-balanced.

To achieve this, you want to divide the students into three groups based on their performance levels. The first group will consist of the strongest students, attempting the most difficult problems. The second group will consist of good but not the best students, who will attempt moderately difficult problems. The third group will consist of students who are still learning and who will attempt the easiest problems.

You have a total of N students, and you want to create three groups of students such that the number of students in the first group is x , the number of students in the second group is y (where y is greater than or equal to x), and the number of students in the third group is z (where z is greater than or equal to y). You want to ensure that the groups are well-balanced, so you want to minimize the difference between the number of students in the first and third groups (i.e., $z - x$).

Write a program to find the values of x , y , and z .

Input:

The first line of the input contains an integer T ($1 \leq T \leq 1000$), the number of test cases. Each test case consists of a single integer N ($3 \leq N \leq 10^9$), the number of students.

Output:

For each test case, output a line in the following format: "Case # n_i : x y z ", where n_i is the test case number (starting from 1), and x , y , and z are the number of students in the first, second, and third groups, respectively, that satisfy the above conditions.

Sample:

Input	Output
2	1 1 1
3	3 3 4
10	

