G • The Erdös-Straus Conjecture

The *Brocard Erdös-Straus* conjecture is that for any integer $n > 2$, there are positive integers $a \le b \le c$, so that:

$$(1) \quad 4/n = 1/a + 1/b + 1/c$$

There may be multiple solutions. For example:

$$4/18 = 1/9 + 1/10 + 1/90 = 1/5 + 1/90 + 1/90 = 1/5 + 1/46 + 1/2470$$

Since it is still a conjecture, there are obviously no counterexamples for $n \le 50{,}000$. For this problem, you will write a program which takes as input an integer n between 2 and 50000 inclusive and returns the smallest triple of integers a, b, c in lexicographic order which satisfies equation (1) above. That is, if $a1$, $b1$, $c1$ is any other solution to (1) for the given input, then either ($a < a1$) or ($a = a1$ and $b \le b1$).

Input

The first line of input contains a single decimal integer P, ($1 \le P \le 1000$), which is the number of data sets that follow. Each data set should be processed identically and independently.

Each data set consists of a single line of input. It contains the data set number, ***K,*** followed by a single space, followed by the decimal integer ***n,*** (***2*** ≤ ***n*** ≤ ***50000***).

Output

For each data set there is one line of output. The single output line consists of the data set number, ***K***, followed by a single space followed by the decimal integer values ***a***, ***b*** and ***c*** in that order, separated by single spaces.

Sample Input	Sample Output
5 1 13 2 529 3 49849 4 49850 5 18	1 4 18 468 2 133 23460 71764140 3 12463 207089366 11696183113896622 4 12463 310640276 96497380762715900 5 5 46 2070