PA2-3-2016

Ichiko loves origami and folding papers. Given a piece of rectangular paper she would always fold it in half on the larger side. (e.g. if the paper is 4X10 , she would fold it resulting in a rectangle of 4x5) when folding a side with an odd length , the fraction is ignored after folding ,

e.g. if a side is 9 it will become 4 after folding. Ichiko would stop folding if paper become a square

given a size of initial rectangle and the number of folds, develop a python program to output the sides of the final paper.

Format

Input file the: the first line contains the number of test cases, n. the next n lines contains three integers each, the first two denoting length of sides and the final integer is the number of folds. The integers are separated by a single space.

output

the output for each test case should be on a new line.If the final result is a rectangle of size ab , the output should be a b, separated by a space where a >b. If the folding ends due to encounting a square of length c, the output should be c square . separated by a space.

125 53 5	15 13
31 61 7	15 SQUARE
10 25 12	1 SQUARE