

Mirko has R red and G green apples to share with some of his friends, so that all of them receive the same number of red apples and also the same number of green apples. Mirko does not like apples himself so he doesn't want to be left with any apples afterward.

For example, if Mirko has 4 red and 8 green apples, he can divide them in three ways:

1. One friend gets all 4 red and all 8 green apples;
2. Two friends each receive 2 red apples and 4 green apples;
3. Four friends each receive 1 red and 2 green apples.

Write a program that outputs all ways for Mirko to divide his apples. Assume Mirko has an infinite supply of friends to give apples to.

INPUT

The first line contains two positive integers R and G separated by a space ($1 \leq R, G \leq 1\,000\,000\,000$), the numbers of red and green apples.

OUTPUT

For each possible distribution, output three integers N , X and Y on one line. The number N is the number of friends that will receive apples. The numbers X and Y tell how many red and green apples each of them will receive.

Each distribution needs to be output exactly once. You may output the distributions in any order.

EXAMPLES

input 4 8	input 15 12	input 42 105
output 1 4 8 2 2 4 4 1 2	output 3 5 4 1 15 12	output 1 42 105 3 14 35 7 6 15 21 2 5