

Problem H. Hockey championship

Input file: **standard input**
Output file: **standard output**
Time limit: 1 second
Memory limit: 256 megabytes

The competition involves $2 \times n$ teams from m countries. Teams are randomly matched into n pairs. You know the expected value of the number of pairs in which both teams are from the same country. Find a possible country distribution of teams which has a given expected value.

Input

A single line contains two positive integers x and y . The expected value is equal to $\frac{x}{y}$.

$$1 \leq x, y \leq 1000$$

Output

If there is no suitable distribution of teams by country, print in a single line “-1”.

Otherwise, in the first line of the output file print one positive integer m — the number of countries in which there are teams participating in the competition. In the second line print m positive integer separated by a space — the number of teams in the corresponding country. The sum of the printed numbers has to be even and must not exceed 10^4 . It is guaranteed that if there is a suitable distribution, then there is a distribution that satisfies the given restrictions.

Examples

standard input	standard output
2 1	1 4
1 2	-1