Problem A. Avg

Input file:	*standard input*
Output file:	*standard output*
Time limit:	2 seconds
Memory limit:	512 mebibytes

Find a sequence of steps of the following kind (if it exists) that would make all elements of any array of real numbers $a_1, a_2, \ldots, a_n$ equal:

- pick k distinct indices $b_1, b_2, \ldots, b_k$ $(1 \le b_i \le n)$ and change the values of $a_{b_1}, a_{b_2}, \ldots, a_{b_k}$ to their arithmetic mean (that is, $\frac{1}{k}(a_{b_1} + a_{b_2} + \ldots + a_{b_k})$) simultaneously.

Input

The only line contains two integers n and k $(2 \le k \le n \le 1000$; n is divisible by $k)$.

Output

If a required sequence of steps doesn't exist, display a single integer -1.

Otherwise, display the number of steps in your sequence t $(1 \le kt \le 10^6)$, followed by t step descriptions. Each step description must consist of k distinct integers $b_1, b_2, \ldots, b_k$ $(1 \le b_i \le n)$.

It can be shown that if a valid sequence of steps exists, a sequence satisfying $kt \le 10^6$ exists as well.

Examples

standard input	standard output
4 2	4 1 2 3 4 1 3 2 4
6 3	-1