A. Diverse Permutation

time limit per test: 1 second
memory limit per test: 256 megabytes
input: standard input
output: standard output

Permutation p is an ordered set of integers $p_1, p_2, ..., p_n$, consisting of n distinct positive integers not larger than n. We'll denote as n the length of permutation $p_1, p_2, ..., p_n$.

Your task is to find such permutation p of length n, that the group of numbers $|p_1 - p_2|, |p_2 - p_3|, ..., |p_{n-1} - p_n|$ has exactly k distinct elements.

Input

The single line of the input contains two space-separated positive integers n, k $(1 \le k < n \le 10^5)$.

Output

Print n integers forming the permutation. If there are multiple answers, print any of them.

Examples

input
3 2
output
1 3 2

input
3 1
output
1 2 3

input
5 2
output
1 3 2 4 5

Note

By $|x|$ we denote the absolute value of number x.