CODEFORCES β
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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.

→ Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ACM-ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

[Start virtual contest]

→ Problem tags

[constructive algorithms] [greedy]
No tag edit access

→ Contest materials

- Announcement ✕
- Tutorial ✕