Problem F. Buddy Numbers

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

Polycarp says that two positive integers are *buddies*, if one is divisible by another. For example, 2 and 4 are buddies, and 10 and 3 are not. Note that 1 is buddy with every positive integer.

Given integer n find out if it is possible to arrange all consecutive integers from 1 to n in a row such that any pair of neighbor numbers are buddies. If it is possible, print any of those arrangements.

Input

The only line of the input contains one integer n ($1 \le n \le 1000$).

Output

If it is impossible to arrange numbers from 1 to n in such a way, print -1. Otherwise print one of possible arrangements as n space-separated integers in one line. If here are several possible arrangements, print any of them.

Examples

standard input	standard output
2	2 1
3	3 1 2