Primes from 1 to n

Input file:	standard input
Output file:	standard output
Time limit:	3 seconds
Memory limit:	256 megabytes

Given a number N. Print all **prime** numbers between **1** and N inclusive.

A **prime** number is a number that is greater than **1** and has only two factors which are **1** and **itself**.

In other words : **prime number divisible only by 1 and itself**.

 Be careful that 1 is not prime .

The first few **prime** numbers are

2 3 5 7 11

19 23 29 31

43 47 53 59

71 73 79 83

Input

Only one line containing a number N ($2 \leq N \leq 10^3$).

Output

Print all prime numbers between **1** and N (inclusive) separated by a space.

Example

standard input	standard output
10	2 3 5 7