1,000,000

We were having a hard time making test data yesterday. So we decided not to make an input data for this problem.

So, please make a program that prints all prime numbers under 1,000,000.

Input

There is no input.

Output

Print all prime numbers under 10^6 in increasing order, each separated by a space.

Example

Standard input	Standard output
	2 3 5 7 11 13 17 19 ...

Notes

The output is so large that we couldn't write it here.. If you print the output like the given example, you will get wrong answer.

Time Limit

3 seconds.