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## Control C501A

## P16425\_en

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Your task is to write a program that, for each  $n$  given, prints the  $n$  smallest first prime numbers.

### Input

The input is a sequence of natural numbers  $n$  with  $1 \leq n \leq 1000$ .

### Output

For each  $n$ , print a line with the  $n$  first prime numbers, in increasing order, and separated by a comma.

### Observation

Before reading any  $n$ , do a sieve of Eratosthenes to precalculate the first 1000 prime numbers. Knowing that 7919 is the prime number 1000 could be useful.

### Sample input 1

```
5
10
1
29
```

### Sample output 1

```
2, 3, 5, 7, 11
2, 3, 5, 7, 11, 13, 17, 19, 23, 29
2
2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71, 73, 79, 83, 89, 97, 101, 103, 107, 109
```

### Problem information

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