

Is it Prime?

The Problem

Given an integer, n , determine if it's prime or not.

The Input

The first line of input will contain a single integer, n ($n \leq 10^6$), indicating the number of values to test for primality. The following n lines will contain one integer each, in between 2 and 10^7 , to test for primality.

The Output

For each input case, output 1, if the number is prime on a line by itself, and 0 otherwise.

Sample Input

```
5
2
10000000
169
79
24
```

Sample Output

```
1
0
0
1
0
```