

Problem 3

For a given positive integer N , you have to find how many prime numbers are there upto N .

Input

First line contains T the number of test cases, (about 1000). Each of next T lines contains 1 integer N ($1 \leq N \leq 1000000$).

Output

For each test case print the answer in a new line.

Example

Input:

2
5
10

Output:

3
4