

# Amazing Prime Sequence

Bablu is very fond of Series and Sequences...

After studying Fibonacci Series in Class IX, he was impressed and he designed his own sequence as follows...

$$a[0] = a[1] = 0$$

For  $n > 1$ ,  $a[n] = a[n - 1] + f(n)$ , where  $f(n)$  is smallest prime factor of  $n$ .

He is also very fond of programming and thus made a small program to find  $a[n]$ , but since he is in Class IX, he is not very good at programming. So, he asks you for help. Your task is to find  $a[n]$  for the above sequence....

## Input

Your code will be checked for multiple Test Cases.

First Line of Input contains  $T$  ( $\leq 100$ ), the number of Test Cases.

Next  $T$  lines contain a single number  $N$ . ( $1 < N < 10^7$ ).

## Output

Single line containing  $a[n]$  i.e.  $n$ th number of the sequence for each test case.

## Example

**Input:**

3  
2  
3  
4

**Output:**

2  
5  
7