APS - Amazing Prime Sequence

#number-theory (/problems/tag/number-theory)

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 (<= 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. nth number of the sequence for each test case.

Example

```
Input:
3
2
3
4

Output:
2
5
7
```

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Shubham Jadhav (/users/shubhamjadhav): 2017-05-12 07:48:02
Use long long. cost me 1 WA :)

ANKIT JAIN (/users/ankit004): 2017-05-09 20:44:39
Nice problem ..

arijit pande (/users/saito_hajime): 2017-04-06 20:51:56
Awesome optimisation problem.

lonelybanboo (/users/lonelybanboo): 2017-03-30 08:04:34
And if you use 64 bit signed integers, remember to use "%lld" instead of "%d".....

stranger77 (/users/stranger77): 2017-02-08 04:44:14
My 50th On spoj

karthik_vg (/users/karthik_vg): 2016-12-31 17:06:13

Last edit: 2016-12-31 17:08:52

kira28 (/users/kira28): 2016-12-23 21:56:38
AC in one go!!! XD XD
Another sieve problem:)
#1 on ranks

dwij28 (/users/dwij28): 2016-08-21 15:17:31
Answer for 10000000 is 3203714961609 which is greater than the limit of a 32 bit signed integer. You must use long long, cost me a WA.

iharsh234 (/users/iharsh234): 2016-07-31 11:07:56
when legends copy http://www.spoj.com/problems/APS2/
_/_

nonushikhar (/users/nonushikhar): 2016-07-30 21:26:41
very easy;)

Submit solution! (/submit/APS/)

Added by:	c[R]@zY f[R]0G (/users/ksh15)
Date:	2013-02-14
Time limit:	1s
Source limit:	5000B
Memory limit:	1536MB
Cluster:	Cube (Intel G860) (/clusters/)
Languages:	All except: ASM64