

## AFS - Amazing Factor Sequence

*no tags*

Bhelu is the classmate of Bablu who made the Amazing Prime Sequence (<https://www.spoj.com/problems/APS/>).

He felt jealous of his classmate and decides to make his own sequence. Since he was not very imaginative, he came up with almost the same definition just making a difference in  $f(n)$ :

- $a[0] = a[1] = 0$ .
- For  $n > 1$ ,  $a[n] = a[n - 1] + f(n)$ , where  $f(n)$  is the sum of positive integers in the following set  $S$ .
- $S = \{x \mid x < n \text{ and } n \% x = 0\}$ .

Now, Bablu asked him to make a code to find  $f(n)$  as he already had the code of his sequence. So, Bhelu asks for your help since he doesn't know Programming. Your task is very simple, just find  $a[n]$  for a given value of  $n$  ( $< 10^6$ ).

### 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 positive integer  $N$ . ( $1 < N < 10^6$ ).

### Output

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

## Example

**Input:**

3  
3  
4  
5

**Output:**

2  
5  
6

## Explanation

$f(2) = 1 \{1\}$   
 $f(3) = 1 \{1\}$   
 $f(4) = 3 \{1, 2\}$   
 $f(5) = 1 \{1\}$

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pratyush2013 (/users/pratyush2013): 2016-07-20 19:35:44

this problem is easy if u r not overconfident...please focus more on problem statement

**Last edit: 2016-07-20 19:36:13**



darkchocolate (/users/darkchocolate): 2016-06-14 19:24:06

@Ankit got accepted after declaring array globally. Thanks!



godfrey\_17897 (/users/godfrey\_17897): 2016-02-10 18:00:06

modify sieve and you are done !!!!



GAURAV CHANDEL (/users/gchandel6): 2016-01-31 14:25:49

I love precalculations....



shantanu tripathi (/users/shantanu10): 2015-09-17 19:28:33

$O(n)$  also got accepted...hehe



vedang (/users/vedangmehta): 2015-08-04 23:19:19

DO NOT USE INT.

It costed me many many WAs :(



Piyush Kumar (/users/vectar31): 2015-05-21 16:49:04  
I hate precalculations



Ankit Sultana (/users/bk2dcradle): 2015-04-22 14:12:38  
Use long long and make array global

**Last edit: 2015-04-22 14:12:54**



karan (/users/karankapoor): 2015-04-20 21:55:05  
easy one :)




TIGM (/users/akshay\_goel94): 2014-06-25 13:03:30  
a missing 0 resulted in a lot of wrong answer.

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Added by: c[R]@zY f[R]0G  
(/users/ksh15)  
Date: 2013-03-15  
Time limit: 0.457s  
Source limit: 5000B  
Memory limit: 1536MB  
Cluster: Cube (Intel G860) (/clusters/)  
Languages: All except: ASM64

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