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DIVSUM - Divisor Summation

[#number-theory \(/problems/tag/number-theory\)](/problems/tag/number-theory/)

Given a natural number n ($1 \leq n \leq 500000$), please output the summation of all its proper divisors.

Definition: A proper divisor of a natural number is the divisor that is strictly less than the number.

e.g. number 20 has 5 proper divisors: 1, 2, 4, 5, 10, and the divisor summation is: $1 + 2 + 4 + 5 + 10 = 22$.

Added by: Neal Zane (/users/nealzane)
 Date: 2004-06-10
 Time limit: 3s
 Source limit: 5000B
 Memory limit: 1536MB
 Cluster: Cube (Intel G860) (/clusters/)
 Languages: All
 Resource: Neal Zane

Input

An integer stating the number of test cases (equal to about 200000), and that many lines follow, each containing one integer between 1 and 500000 inclusive.

Output

One integer each line: the divisor summation of the integer given respectively.

Example

Sample Input:

```
3
2
10
20
```

Sample Output:

```
1
8
22
```

[Vote requirements](#) ⚠

- ✓ be spoj user for at least 5 days
- ✗ solved 0 from 15 needed problems
- ✓ solve this problem

Warning: large Input/Output data, be careful with certain languages

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Dimas Hirda Pratama (/users/vimz13): 2016-09-30 12:40:10
 TLE :(

[Own tags](#)
 # # # # # #

 Tag name



ajay (/users/ajayputti): 2016-09-24 17:11:03
what is the basic idea to attempt to this problem



reconnect (/users/reconnect): 2016-09-14 17:24:39
why am I getting WA although the code gives the right output on my machine? Please anybody help. I'm stuck.



Gaurav (/users/gaurav_sr): 2016-09-14 15:33:33
Any idea what's wrong with solution # 17711087. I am getting WA. It's in golang

Missed out case where num=1.

Last edit: 2016-09-14 15:36:31



sahild95 (/users/sahild95): 2016-08-13 08:51:31
I don't know why I'm getting WA when I believe my logic is correct and sample cases are also getting passed.
Please see my solution at: <http://ideone.com/qhZ7L2>



saini428 (/users/saini428): 2016-06-19 05:45:07
don't think to much.....simple



vignesh97 (/users/vignesh97): 2016-06-17 19:52:14
easy problem, AC in first go...



visvats_141095 (/users/visvats_141095): 2016-06-05 19:08:56
AC in first go! :D



azam_9 (/users/azam_9): 2016-06-03 08:59:07
modified sieve also works..



katyalch (/users/katyalch): 2016-05-16 05:48:30
uh oh tle

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2. Please be careful, leave short comments only. Don't spam here.
3. For more discussion (hints, ideas, solutions) please visit our forum (/forum).
4. Authors of the problems are allowed to delete the post and use html code here (e.g. to provide some useful links).

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