

## 1132 - Divisor Summation

### Description

Given a natural number  $n$  ( $1 \leq n \leq 5 \cdot 10^5$ ), 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. For example, the number 20 has 5 proper divisors: 1, 2, 4, 5, 10, and the divisor summation is:  $1 + 2 + 4 + 5 + 10 = 22$ .

### Input specification

An integer stating the number of test cases (equal to about  $2 \cdot 10^5$ ), and that many lines follow, each containing one integer between **1** and  **$5 \cdot 10^5$**  inclusive.

### Output specification

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

### Sample input

```
3
2
10
20
```

### Sample output

```
1
8
22
```

### Hint(s)

Source	Sphere Online Judge
Added by	<b>ejaltuna</b>
Addition date	2011-10-13 06:06:55.0
Time limit (ms)	5000
<b>Test limit (ms)</b>	5000

## Caribbean Online Judge

Memory limit (kb)	131072
Output limit (mb)	64
Size limit (bytes)	100000
Enabled languages	C C# C++ Java Pascal Perl PHP Python Ruby Text