**Sum of divisors**

Show Topic Tags   

Given a natural number, calculate sum of all its proper divisors. A proper divisor of a natural number is the divisor that is strictly less than the number.

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

Examples:

Input : num = 10

Output: 8

// proper divisors 1 + 2 + 5 = 8

Input : num = 36

Output: 55

// proper divisors 1 + 2 + 3 + 4 + 6 + 9 + 12 + 18 = 55

**Input:**

The first line of input contains an integer T denoting the number of test cases.  
The first line of each test case is N.  
  
**Output:**  
Print sum of divisors of N.

**Constraints:**  
1 ≤ T ≤ 200  
2 ≤ N ≤ 1000  
  
**Example:**  
**Input:**  
2  
6  
10  
  
**Output:**  
6  
8

\*\*For More Examples Use Expected Output\*\*

<http://practice.geeksforgeeks.org/problems/sum-of-divisors/0>

/\*

\* To change this template, choose Tools | Templates

\* and open the template in the editor.

\*/

package javaapplication244;

import java.io.BufferedReader;

import java.io.IOException;

import java.io.InputStreamReader;

import java.util.ArrayList;

import java.util.Collections;

import java.util.List;

/\*\*

\*

\* @author Administrador

\*/

public class JavaApplication244 {

/\*\*

\* @param args the command line arguments

\*/

public static void main(String[] args) throws IOException {

// TODO code application logic here

BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

int t = Integer.parseInt(br.readLine());

while(t-- > 0) {

int n = Integer.parseInt(br.readLine());

int sum =0;

for(int i =1; i<=Math.sqrt(n); i++) {

if(n%i==0 ) {

sum += i;

if( n/i != i) {

sum += n/i;

}

}

}

System.out.println(sum-n);

}

}

}