C Yet another GCDSUM

Input: Standard Input
Output: Standard Output

Given the value of N, you will have to find the value of S. The definition of S is given in the following code:

```
S=0;
for(i=1;i<=N;i++)
  for(j=1;j<=N;j++)
    if((N % i)==0 && (N % j)==0)
        S+=gcd(i,j);
```

/*Here **gcd()** is a function that finds the greatest common divisor of the two input numbers. **%** is standard remainder sign from C/C++/java syntax where **a % b** is the remainder of a modulo b, so **(n % i) == 0 && (n % j) == 0** means **N** is divisible by both **i** and **j***/

Input

First line of the input is **T (T ≤ 100)**, then T test cases follows in next **T** lines. Each line contains an integer **N (1 ≤ N ≤ 100000000000000 or 10^{14})**. The meaning of **N** is given in the problem statement.

Output

For each test case print a line in "**`Case I: S`**" format where **I** is case number and **S** is the value for the **N** of this case. The value of **S** will fit in a **64-bit** signed integer.

Sample Input	Output for Sample Input
12 1 2 3 4 5 6 7 8 9 10 1000 10000	Case 1: 1 Case 2: 5 Case 3: 6 Case 4: 15 Case 5: 8 Case 6: 30 Case 7: 10 Case 8: 37 Case 9: 23 Case 10: 40 Case 11: 8584 Case 12: 97027