

# Problem D - Divisors

Let us define the functions  $d(n)$  and  $\sigma(n)$  as

$d(n)$  = number of divisors of  $n$

$\sigma(n)$  = summation of divisors of  $n$

Here divisors of  $n$  include both 1 and  $n$ . For example divisors of 6 are 1, 2, 3 and 6. So  $d(6) = 4$  and  $\sigma(6) = 12$

Now let us define two more function  $g(a,b,k)$  and  $h(a,b,k)$  as

$$g(a,b,k) = \sum_{i} d(i)$$

$$h(a,b,k) = \sum_{i} \sigma(i)$$

Where  $a \leq i \leq b$  and  $i$  is divisible by  $k$ .

For example,  $g(5,12,3) = d(6) + d(9) + d(12) = 4 + 3 + 6 = 13$  and  $h(5,12,3) = \sigma(6) + \sigma(9) + \sigma(12) = 12 + 13 + 28 = 53$ . Given  $a, b, k$  you have to calculate  $g(a,b,k)$  and  $h(a,b,k)$ .

## Input

The first line of the input file contains an integer  $T$  ( $T \leq 75$ ) which denotes the total number of test cases. The description of each test case is given below:

Three integers in a line. First integer is contains  $a$ , second integer is  $b$  and third integer is  $k$ . You may assume  $0 < a \leq b \leq 10^5$ ,  $0 < k < 2000$ .

## Output

For each test case print one line containing  $g(a,b,k)$  and  $h(a,b,k)$  separated by a space as defined above.

## Sample Input

```
2
5 12 3
1 100 3
```

## Sample Output

```
13 53
217 3323
```

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**Next Generation Contest 6**