

Problem I. GCD

Time limit 1000 ms
Mem limit 32768 kB
OS Windows

The greatest common divisor $\text{GCD}(a,b)$ of two positive integers a and b , sometimes written (a,b) , is the largest divisor common to a and b . For example, $(1,2)=1$, $(12,18)=6$.

(a,b) can be easily found by the Euclidean algorithm. Now Carp is considering a little more difficult problem:

Given integers N and M , how many integer X satisfies $1 \leq X \leq N$ and $(X,N) \geq M$.

Input

The first line of input is an integer T ($T \leq 100$) representing the number of test cases. The following T lines each contains two numbers N and M ($2 \leq N \leq 1000000000$, $1 \leq M \leq N$), representing a test case.

Output

For each test case, output the answer on a single line.

Sample

Input	Output
3 1 1 10 2 10000 72	1 6 260