A. Subtractions

time limit per test: 1 second

memory limit per test: 256 megabytes

input: standard input

output: standard output

You've got two numbers. As long as they are both larger than zero, they go through the same operation: subtract the lesser number from the larger one. If they equal substract one number from the another. For example, one operation transforms pair (4,17) to pair (4,13), it transforms (5,5) to (0,5).

You've got some number of pairs (a_i, b_i). How many operations will be performed for each of them?

Input

The first line contains the number of pairs n $(1 \leq n \leq 1000)$. Then follow n lines, each line contains a pair of positive integers a_i, b_i $(1 \leq a_i,\ b_i \leq 10^9)$.

Output

Print the sought number of operations for each pair on a single line.

Examples

input

```
2
4 17
7 987654321
```

output

```
8
141093479
```

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