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Home » Compete » February Lunchtime 2021 Division 3 » Smallest Possible Whole Number

Smallest Possible Whole Number | Problem Code: SMOL

У Tweet

You are given two integers N and K. You may perform the following operation any number of times (including zero): change N to N-K, i.e. subtract K from N. Find the smallest non-negative integer value of N you can obtain this way.

Input

- $\bullet\,$ The first line of the input contains a single integer T denoting the number of test cases. The description of T test cases follows.
- The first and only line of each test case contains two space-separated integers N and K

Output

For each test case, print a single line containing one integer — the smallest value you can get.

Constraints

- $1 \le T \le 10^5$
- $1 \le N \le 10^9$
- $0 \le K \le 10^9$

Subtasks

Subtask #1 (100 points): original constraints

Example Input

- 3
- 5 2 4 4
- 2 5

Example Output

- 1
- 0

Explanation

Example case 1:

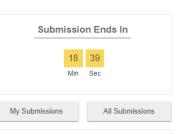
- ullet First, we change N=5 to N-K=5-2=3
- ullet Then, we have N=3 and we change it to N-K=3-2=1.

Since 1 < K, the process stops here and the smallest value is 1.

Example case 2: We change N=4 to N-K=4-4=0. Since 0 < K, the process stops here and the smallest value is $\boldsymbol{0}.$

Example case 3: Since 2 < K initially, we should not perform any operations and the smallest value is ${\bf 2}.$

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Date Added:	17-02-2021
Time Limit:	1 secs
Source Limit:	50000 Bytes
Languages:	CPP14, C, JAVA, PYTH 3.6, PYTH, CS2, ADA, PYPY, PYP3, TEXT, CPP17, PAS fpc, RUBY, PHP, NODEJS, GO, TCL, HASK, PERL, SCALA, kotlin, BASH, JS, PAS gpc, BF, LISP sbcl, CLOJ, LUA, D, R, CAML, rust, ASM, FORT, FS, LISP clisp, SQL, swift, SCM guile,



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CodeChef was created as a platform to help programmers make it big in the world of algorithms, computer programming, and programming contests. At CodeChef we work hard to revive the geek in you by hosting a programming contest at the start of the month and two smaller programming challenges at the middle and end of the month. We also aim to have training sessions and discussions related to algorithms, binary search, technicalities like array size and the likes. Apart from providing a platform for programming competitions, CodeChef also has various algorithm tutorials and forum discussions to help those who are new to the world of computer programming.

Practice Section - A Place to hone your 'Computer Programming Skills'

Try your hand at one of our many practice problems and submit your solution in the language of your choice. Our programming contest judge accepts solutions in over 55+ programming languages. Preparing for coding contests were never this much fun! Receive points, and move up through the CodeChef ranks. Use our practice section to better prepare yourself for the multiple programming challenges that take place through-out the month on CodeChef.

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Here is where you can show off your computer programming skills. Take part in our 10 days long monthly coding contest and the shorter format Cook-off and Lunchtime coding contests. Put yourself up for recognition and win great prizes. Our programming contests have prizes worth up to INR 20,000 (for Indian Community), \$700 (for Global Community) and lots more CodeChef goodies up for grabs.

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