

Bingo

Input file: **standard input**
Output file: **standard output**
Time limit: 2 seconds
Memory limit: 1024 megabytes

Do you remember the hand-clapping game in elementary school? Here is a harder version.

You're given two positive integers n and m . Find the minimal integer x where $x > n$ and x is a **good** number. A good number x satisfies $x \equiv 0 \pmod{m}$ or x contains m as a substring in decimal representation.

For example, when $m = 3$ and $n = 7$, $x = 9$ is the answer since $9 \equiv 0 \pmod{3}$. When $m = 3$ and $n = 12$, $x = 13$ is the answer since 13 contains 3 as a substring.

Input

The first line contains one integer T ($1 \leq T \leq 10^5$), representing the number of test cases.

For each test case, one line contains two integers n and m ($1 \leq n < 10^{10^6}, 1 \leq m \leq 10^9$). n does not contain leading zeros.

It is guaranteed that $\sum \lceil \log_{10}(n) \rceil \leq 3 \times 10^6$

Output

For each test case, output one single line containing one integer x , representing the answer.

Example

standard input	standard output
6	9
7 3	13
12 3	10
9 10	251
249 51	1370
1369 37	3
2 1	