5. Multiple

Program Name: Multiple.java Input File: multiple.dat

For a given positive integer a, you are to find the smallest multiple of a that does not contain any digits in a given set of digits.

Input

The first line of input will contain a single integer n that indicates the number of lines to follow. Each the following n lines will contain a positive integer j followed by a space and a string s of numeric characters (digits 0 through 9).

Output

For each integer j, print the smallest multiple of j that does not contain any of the digits in s.

Note: You may assume there will always be a multiple of j that fits the criteria listed.

Example Input File

3 22 017 15 3425 12 20465

Example Output to Screen

44

60

888