



Problem D. Dramatic Multiplications

Input file: D.IN
Program file: D.cpp/D.c/D.dpr/D.java

Hassan, helping with his younger brother's homework, found out that when you multiply 102564 by 4, its right-most digit moves to the left, and the other digits move one position to the right; i.e. $4 \times 102564 = 410256$. We call a number that has this property when multiplied by n , an n -dramatic number. For instance, 102564 and 128205 are both 4-dramatic. Given two one-digit numbers n and k , the goal is to find the smallest n -dramatic number that its rightmost digit is k .

Input

On the first line of the input, there is an integer t , which is the number of cases that follow. Each test case, is on a line by itself, and contains two integers n and k , where $1 \leq n \leq 9$, and $1 \leq k \leq 9$.

Output

For each test case, output a single integer on a line by itself, which is the smallest n -dramatic number that its rightmost digit is k . If no such number exists, output 0 instead.

Sample input and output

D. IN	Standard Output
2	128205
4 5	0
2 1	