Don't you think **162456723** very special? Look at the picture below if you are unable to find its speciality. ($a|b$ means 'b is divisible by a')

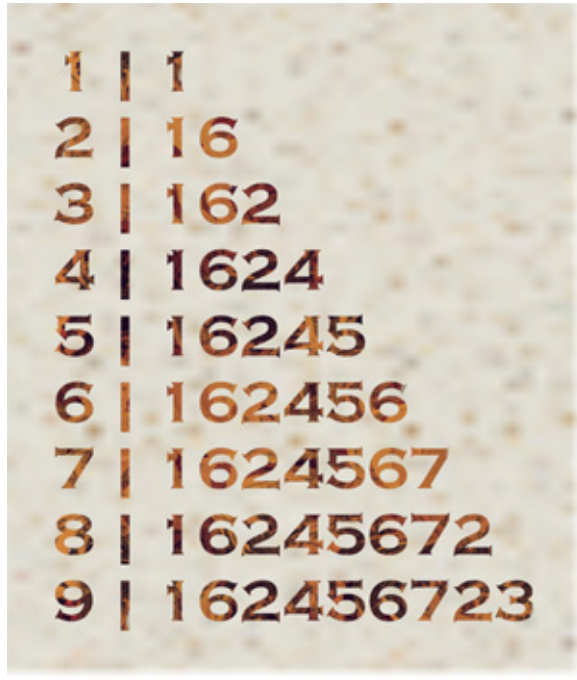

Figure: Super Numbers

Given n, m ($0 < n < m < 30$), you are to find a m-digit positive integer X such that for every i ($n \leq i \leq m$), the first i digits of X is a multiple of i. If more than one such X exists, you should output the lexicographically smallest one. Note that the first digit of X should **not** be 0.

Input

The first line of the input contains a single integer t ($1 \leq t \leq 15$), the number of test cases followed. For each case, two integers n and m are separated by a single space.

Output

For each test case, print the case number and X. If no such number, print '`-1`'.

Sample Input

```
2
1 10
3 29
```

Sample Output

```
Case 1: 1020005640
Case 2: -1
```