Problem A. Digit Product

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	256 megabytes

Define the "digit product" $f(x)$ of a positive integer x as the product of all its digits. For example, $f(1234) = 1 \times 2 \times 3 \times 4 = 24$, and $f(100) = 1 \times 0 \times 0 = 0$.

Given two integers l and r, please calculate the following value:

$$(\prod_{i=l}^{r} f(i)) \mod (10^9 + 7)$$

In case that you don't know what $\prod$ represents, the above expression is the same as

$$(f(l) \times f(l+1) \times \cdots \times f(r)) \mod (10^9 + 7)$$

Input

There are multiple test cases. The first line of the input contains an integer T (about 10^5), indicating the number of test cases. For each test case:

The first and only line contains two integers l and r ($1 \le l \le r \le 10^9$), indicating the given two integers. The integers are given without leading zeros.

Output

For each test case output one line containing one integer indicating the answer.

Example

standard input	standard output
2 1 9 97 99	362880 367416

Note

For the first sample test case, the answer is $9! \mod (10^9 + 7) = 362880$.

For the second sample test case, the answer is $(f(97) \times f(98) \times f(99)) \mod (10^9+7) = (9 \times 7 \times 9 \times 8 \times 9 \times 9) \mod (10^9 + 7) = 367416$.