



Problem E

Numerophobia

Numerophobia is a fear or avoidance of dealing with numbers, or sometimes a particular number. For example, tetraphobia is a practice of avoiding the number 4, a common superstition in East Asia.

Let S be the set of all positive integers no larger than N , i.e. $\{1, 2, 3, \dots, N\}$. Given a single-digit number K ($K \in \{0..9\}$), strip all digit K in S to make S' .

For example, let $S = \{1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13\}$ and $K = 1$, then $S' = \{\text{X}, 2, 3, 4, 5, 6, 7, 8, 9, \text{X}0, \text{X}\text{X}, \text{X}2, \text{X}3\} = \{\emptyset, 2, 3, 4, 5, 6, 7, 8, 9, 0, \emptyset, 2, 3\}$, i.e. all digit 1 are removed from S .

The size of S' is the number of unique elements in S' excluding the empty/null number (\emptyset).

In the previous example, the size of $S' = \{\emptyset, 2, 3, 4, 5, 6, 7, 8, 9, 0, \emptyset, 2, 3\}$ is 9 with the unique elements be $\{0, 2, 3, 4, 5, 6, 7, 8, 9\}$. Note that \emptyset is removed from S' when counting unique elements.

Given N and K , your task is to determine the size of the corresponding S' .

Input

Input begins with an integer T ($1 \leq T \leq 100$) representing the number of cases.

Each case contains two integers N K ($1 \leq N \leq 10^9$; $0 \leq K \leq 9$) representing the largest positive integer in set S and the digit to be removed, respectively.

Output

For each case, output in a line "Case #X: Y" (without quotes) where X is the case number (starts from 1) and Y is the output for the respective case.

Sample Input #1

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3
13 1
100 4
20 0
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Sample Output #1

Case #1: 9 Case #2: 82 Case #3: 18
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Explanation for the sample input/output #1

For the 3rd case, $S' = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13, 14, 15, 16, 17, 18, 19\}$.