

Divide Digit String

Input file: **standard input**
Output file: **standard output**
Time limit: 2 seconds
Memory limit: 1024 megabytes

You are given a digit string S of length N consisting of digits from 1 to 9, and integers M and K ($1 \leq K \leq M \leq N$).

You need to split S into M non-empty contiguous substrings and interpret each substring as a decimal integer. Find the smallest possible value that can be the K -th largest among these M integers.

You have T test cases; solve each of them.

Input

The input is given from Standard Input in the following format:

```
T
case1
case2
⋮
caseT
```

Each test case is given in the following format:

```
N M K
S
```

- $1 \leq T \leq 10^5$
- $1 \leq K \leq M \leq N \leq 10^6$
- T, N, M and K are integers.
- S is a digit string of length N consisting of digits from 1 to 9.
- The sum of N over all test cases does not exceed 10^6 .

Output

Print T lines. On the i -th line, print the answer for the i -th test case.

Example

standard input	standard output
3	123
5 2 1	1
12345	26
5 3 3	
12345	
10 7 1	
3141592653	

Note

In the first test case, by splitting S into 123 and 45, the largest integer is 123, which is the smallest possible value for the largest integer.

In the second test case, by splitting S into 1, 23 and 45, the third largest integer is 1, which is the smallest possible value for the third largest integer.