Ashton and String

Ashton appeared for a job interview and is asked the following question. Arrange all the distinct substrings of a given string in lexicographical order and concatenate them. Print the K^{th} character of the concatenated string. It is assured that given value of K will be valid i.e. there will be a K^{th} character. Can you help Ashton out with this?

Note We have distinct substrings here, i.e. if string is `aa`, it's distinct substrings are `a` and `aa`.

Input Format

First line will contain a number T i.e. number of test cases.
First line of each test case will contain a string containing characters $(a - z)$ and second line will contain a number K.

Constraints

$1 \leq T \leq 5$
$1 \leq length \leq 10^5$
K will be an appropriate integer.

Output Format

Print K^{th} character (the string is 1 indexed)

Sample Input

```
1
dbac
3
```

Sample Output

```
c
```

Explanation

The substrings when arranged in lexicographic order are as follows

```
a, ac, b, ba, bac, c, d, db, dba, dbac
```

On concatenating them, we get

```
aacbbabaccddbdbadbac
```

The third character in this string is `c` and hence the answer.