Tomb Raider

Lara and her friend are visiting the old city of Gaul. They found a secret door to a tomb. A message was written on the door.

Take your courage young blood,

Smartness excels on the weapon you craft

Life at Stake

The best one stands the ground

After reading this, both of them were excited to go inside the tomb and explore it. But before going inside, they decided to craft a weapon. When they searched for materials, they found N number of materials in the nearby material hill. They were confused about the selection of the materials for the weapon. So Lara's friend Deepika gave an idea to craft this weapon. Deepika gave a random number (very large). To craft the weapon, they must select a material and put it into the forge. They can add another material after melting the current material in the forge. Using Deepika's number Lara will put the metals into the forge. Each material is represented by a number starting from 1 to N.

Let's say there are $N = 30$ materials, and Deepika gave the number 1252.

- 1, 2, 5, 2
- 12, 5, 2
- 1, 25, 2

So there are three ways to craft the weapon. The unique order of the materials you put in the forge will produce a unique weapon. Lara started to wonder how many possible ways to craft the weapon. Since you are so good at programming and took the courage to participate in MoraXtreme, help Lara figure out the number of different weapons she can craft.

Input Format

The first line contains the number of test cases T.
Each test case contains 2 lines.
The first line has the number of materials N.
The second line contains an integer representing the number selected by Deepika.

Constraints

$1 \leq T \leq 10^4$
$14 < N < 100$
$0 \leq$ Each integer selected by Deepika $\leq 10^{1500}$

Output Format

Print a single number indicating the number of possible weapons Lara can forge.

Sample Input 0

```
5
24
65416845211
89
994949419841
56
9845618651655
29
98465168451986516845198465141534894 61
45
9231235451165
```

Sample Output 0

```
6
36
36
64
78
```