**Find** Minimum sum

**Problem Statements :**

You are given a string of lowercase alphabets and a number k, the task is to print the minimum value of the string after removal of ‘k’ characters. The value of a string is defined as the sum of squares of the count of each distinct character. For example consider the string “saideep”, here frequencies of characters are s-1, a-1, i-1, e-2, d-1, p-1 and value of the string is 1^2 + 1^2 + 1^2 + 1^2 + 1^2 + 2^2 = 9.

**Input Format :**

First line contains integer t as number of test cases.

Each test case contains an integer k and string S separated by space.

**Constraints :**

1 < t < 10

1< S,k < 10000000

**Output Format :**

For each test case you have to print the required output as given below.

**Sample Input :**

2

1 abccc

2 abbccc

2 aaab

**Sample Output :**

6

6

2

**Explanation :**

Input : str = abccc, K = 1  
Output : 6  
We remove c to get the value as 11 + 11 + 22  
  
Input : str = aaab, K = 2  
Output : 2

**Time Limit :**

1 sec