1. Two friends Kunal and Satyam are playing an interesting game. They take turns drawing a ball from a bag which initially contains R red balls and G green balls. Each player draws a ball alternatively and never put it back. The person who is the first to draw a red balls wins. Satyam always draws first. If there are no more balls in the bag and nobody has drawn a red ball, the satyam wins. What is the probability of the Satyam winning?

2. Given a String **S** and a character **C**, find the length of the longest palindromic subsequence of **S** containing the character **C**.

   Input

   •   The First Line contains an integer **T** denoting the number of testcases.

   •   Each testcase is of 2 lines.

         ▪   The First line contains one character **C**

         ▪   The Second line contains the string **S**

   Output

   For every test case print the maximum length on a new line.

3. Given a string, find the length of the maximum length palindromic sub string. Suppose **'l'** is the length of maximum length palindromic sub string, check whether **'l'** is prime number or not, if it is prime ,then print **'PRIME'** else **'NOT PRIME'**

4. You are given an array A of N integers. Each integer is a single digit number in the range[0-9]. You are also given a number K. Now, you need to count how many subsequences of the array A exist such that they form a K digit valid number. A subsequence of size K is called a valid number if there are no leading zeros in the number formed.