**Form a palindrome**

Given a string, find the minimum number of characters to be inserted to convert it to palindrome.  
For Example:  
ab: Number of insertions required is 1. **b**ab or aba  
aa: Number of insertions required is 0. aa  
abcd: Number of insertions required is 3. **dcb**abcd

**Input:**

The first line of input contains an integer T denoting the number of test cases.  
The first line of each test case is S.  
  
**Output:**

Print the minimum number of characters.  
  
**Constraints:**

1 ≤ T ≤ 50  
1 ≤ S ≤ 40  
  
**Example:**

**Input:**  
3  
abcd  
aba  
geeks

**Output:**  
3  
0  
3

* SOLUTION

#include<bits/stdc++.h>

using namespace std;

int main()

{

int t;

cin>>t;

while(t--)

{

string s1,s2;

cin>>s1;

s2=s1;

int n=s1.length(),m=s2.length();

reverse(s2.begin(),s2.end());

int dp[n+1][m+1],i,j;

for(i=0;i<=n;i++)

dp[i][0]=0;

for(i=0;i<=m;i++)

dp[0][i]=0;

for(i=1;i<=n;i++)

{

for(j=1;j<=m;j++)

{

if(s1[i-1]==s2[j-1])

dp[i][j]=1+dp[i-1][j-1];

else

dp[i][j]=max(dp[i-1][j],dp[i][j-1]);

}

}

cout<<n-dp[n][m]<<"\n";

}

}