#include<iostream>

#include<algorithm>

#include<string>

using namespace std;

int main()

{

int count=1;

int sum=0;

int t;

cin>>t;

while(t--)

{

int n;

cin>>n;

int q;

cin>>q;

string s;

cin>>s;

sort(s.begin(),s.end());

for(int i=0;i<q;i++)

{

sum=0;

int c;

cin>>c;

if(c==0)

cout<<n<<endl;

else{

for(int j=0;j<s.length()-1;j++)

{

if(s[j]==s[j+1])

count++;

else

{

if(count<=c)

count=1;

if(count>c)

{

sum=sum+(count-c);

count=1;

}

}

}

if(count<=c)

count=1;

if(count>c)

{

sum=sum+(count-c);

count=1;

}

cout<<sum<<endl;

}

}

}

}