```cpp
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#include<bits/stdc++.h>
using namespace std;

#define i64 long long int
#define u64 unsigned long long int
#define fin(a) freopen(a,"r",stdin)
#define fout(a) freopen(a,"w",stdout)
#define repc(i,a,b) for(__typeof(b) i=(a); i<=(b); i++)
#define repr(i,a,b) for(__typeof(b) i=(a); i>=(b); i--)
#define clr(a) a.clear()
#define sz(a) (int)a.size()
#define mem(a,b) memset(a,b,sizeof a)
#define ERASE(a) a.erase(a.begin(),a.end())

#define sc scanf
#define S(z) scanf("%d",&z)
#define SL(z) scanf("%I64d",&z)
#define S2(xx,zz) scanf("%d %d",&xx,&zz)
#define SL2(xx,zz) scanf("%I64d %I64d",&xx,&zz)
#define SC(z) scanf("%s",&z)

#define pf printf
#define pfn printf("\n")
#define pfs printf(" ")
#define PF(z) printf("%d",z)
#define PFL(z) printf("%I64d",z)
#define PF2(x,y) printf("%d %d",x,y)
#define PFS(z) printf("%s",z)
#define ff first
#define ss second
#define mp make_pair
#define pb push_back
#define inf 2000000007
#define pi  acos(-1.0)
#define MAX 200007
#define MOD 1000000007LL
#define eps 1e-11

template <class T>T sqr(T x) {return x*x;}
template< class T > T gcd(T a, T b) { return (b != 0 ? gcd<T>(b, a%b) : a); }
template< class T > T lcm(T a, T b) { return (a / gcd<T>(a, b) * b); }
template <class T> inline T bigmod(T p,T e,T M)
{
    if(e==0) return 1;
    if(e%2==0){i64 t=bigmod(p,e/2,M);return (T)((t*t)%M);}
    return (T)((i64)bigmod(p,e-1,M)*(i64)p)%M;
}
template <class T> inline T bigexp(T p,T e)
{
    if(e==0)return 1;
    if(e%2==0){i64 t=bigexp(p,e/2);return (T)((t*t));}
    return (T)((i64)bigexp(p,e-1)*(i64)p);
}
template <class T> inline T modinverse(T a,T M){return bigmod(a,M-2,M);}

int dx4[]={1,0,-1,0};int dy4[]={0,1,0,-1}; //4 Direction
int dx8[]={1,1,0,-1,-1,-1,0,1};int dy8[]={0,1,1,1,0,-1,-1,-1};//8 direction
int nx8[]={1,1,-1,-1,2,2,-2,-2};int ny8[]={2,-2,2,-2,1,-1,1,-1};//8 direction
int month[]={31,28,31,30,31,30,31,31,30,31,30,31};
/*
struct Graph
{
    int u,v,w;
    bool operator<(const Graph& p)
    const {return w<p.w;} // opererta chotor jnne
}edge[10];
struct compare
{
    bool operator()(const int&l,const int&r)
    {
        return l>r;
    }
};
priority_queue<int,vector<int>,compare>pq;

i64 ncr[1005][1005];
void nCr()
{
    repc(i,0,1002) ncr[i][0]=1LL;
    repc(i,1,1002)
    repc(j,1,i)
    ncr[i][j]=(ncr[i-1][j-1]+ncr[i-1][j])%MOD;
}

*/
/******************* Code Starts here *******************/

int g[250005][26],out[250005],co,t,n,l,f[250005],res[505],cnt[250005];
char s[505][505],T[1000005];
vector<int>v[250005];
void buildmatchingmachine(char s[][505], int k)
{
    int len,id,failure;
    mem(out,0);
    mem(g,-1);
    mem(f,-1);
    int currstate=0,state=0;
    //pf("-- %d\n",k);
    for(int i=0;i<k;i++)
    {
      //  pf("%s\n",s[i]);
        currstate=0;
        len=strlen(s[i]);
        for(int j=0;j<len;j++)
        {
          id=s[i][j]-'a';
          if(g[currstate][id]==-1)
          {
              g[currstate][id]=++state;
          }

          currstate=g[currstate][id];
        }
       // pf("%d ----- %d\n",i,currstate);
        out[currstate] |= (1<<i);
    }

    for(int i=0;i<26;i++)//max xharacter is 26
    {
        if(g[0][i]==-1)
           g[0][i]=0;
    }
    queue<int>q;
    for(int i=0;i<26;i++)
    {
        if(g[0][i]!=0)
        {
            f[g[0][i]]=0;
            q.push(g[0][i]);
            v[0].pb(g[0][i]);
        }
    }

    while(!q.empty())
    {
        state=q.front();
        q.pop();
        for(int i=0;i<26;i++)
        {
            if(g[state][i]!=-1)
            {
                failure=f[state];

                while(g[failure][i]==-1)
                    failure=f[failure];

                failure=g[failure][i];
                f[g[state][i]]=failure;
                v[failure].pb(g[state][i]);
                out[g[state][i]] |= out[failure];

                q.push(g[state][i]);
            }
        }
    }
}

int findnextstate(int currstate, char chh)
{
    int ch=chh-'a';
    while(g[currstate][ch]==-1)
        currstate=f[currstate];
    currstate=g[currstate][ch];
    return currstate;
}

void searchwords(char T[], int l, int n)
{
    int currstate=0;
    for(int i=0;i<l;i++)
    {
      //  pf("==========  %d %c\n",i,T[i]);
        currstate=findnextstate(currstate, T[i]);
        cnt[currstate]++;
    }
}

int dfs(int u)
{
    int res=0;
    for(int i=0;i<v[u].size();i++)
       res+=dfs(v[u][i]);
    return res+cnt[u];
}
int main()
{
    //fout("dfdf.txt");
    S(t);
    while(t--)
    {
        S(n);
        SC(T);
        for(int i=0;i<n;i++)
            {
                SC(s[i]);
                res[i]=0;
            }
        l=strlen(T);
        buildmatchingmachine(s,n);
        searchwords(T,l,n);
//        for(int i=0;i<=15;i++)
//            pf("%d %d\n",i,cnt[i]);
        cnt[0]=0;
        pf("Case %d:\n",++co);
        for(int i=0;i<n;i++)
        {
            l=strlen(s[i]);
            int go=0,id;
            for(int j=0;j<l;j++)
            {
              id=s[i][j]-'a';
              go=g[go][id];
            }
            pf("%d\n",dfs(go));
        }
        mem(cnt,0);
        repc(i,0,250001) v[i].clear();
    }
    return 0;
}
```