# 2087剪花布条

**Problem Description**

一块花布条，里面有些图案，另有一块直接可用的小饰条，里面也有一些图案。对于给定的花布条和小饰条，计算一下能从花布条中尽可能剪出几块小饰条来呢？

**Input**

输入中含有一些数据，分别是成对出现的花布条和小饰条，其布条都是用可见ASCII字符表示的，可见的ASCII字符有多少个，布条的花纹也有多少种花样。花纹条和小饰条不会超过1000个字符长。如果遇见#字符，则不再进行工作。

**Output**

输出能从花纹布中剪出的最多小饰条个数，如果一块都没有，那就老老实实输出0，每个结果之间应换行。

**Sample Input**

abcde a3

aaaaaa aa

#

**Sample Output**

0

3

 代码清单：

#include<cstdio>

#include<cstring>

using namespace std;

char a[1005];

char b[1005];

int lena,lenb;

int next[1005];

void getnext()

{

int i=0,k=-1;

next[0]=-1;

while(i<lenb)

{

if(k==-1||b[i]==b[k])

{

i++;

k++;

next[i]=k;

}

else k=next[k];

}

}

int KMP()

{

getnext();

int i=0,j=0;

int cnt=0;

while(i<lena)

{

if(j==-1||a[i]==b[j])

{

i++;

j++;

}

else j=next[j];

if(j==lenb)

{

cnt++;

j=0;//若两个不同的匹配没有交集则j=0,若存在交集则j=next[j];

}

}

return cnt;

}

int main()

{

while(scanf("%s",a)!=EOF)

{

if(\*a=='#') break;

scanf("%s",b);

lena=strlen(a);

lenb=strlen(b);

printf("%d\n",KMP());

}

return 0;

}

# 1711 Number Sequence

**Problem Description**

Given two sequences of numbers : a[1], a[2], ...... , a[N], and b[1], b[2], ...... , b[M] (1 <= M <= 10000, 1 <= N <= 1000000). Your task is to find a number K which make a[K] = b[1], a[K + 1] = b[2], ...... , a[K + M - 1] = b[M]. If there are more than one K exist, output the smallest one.

**Input**

The first line of input is a number T which indicate the number of cases. Each case contains three lines. The first line is two numbers N and M (1 <= M <= 10000, 1 <= N <= 1000000). The second line contains N integers which indicate a[1], a[2], ...... , a[N]. The third line contains M integers which indicate b[1], b[2], ...... , b[M]. All integers are in the range of [-1000000, 1000000].

**Output**

For each test case, you should output one line which only contain K described above. If no such K exists, output -1 instead.

**Sample Input**

2

13 5

1 2 1 2 3 1 2 3 1 3 2 1 2

1 2 3 1 3

13 5

1 2 1 2 3 1 2 3 1 3 2 1 2

1 2 3 2 1

**Sample Output**

6

-1

#include<cstdio>

#include<cstring>

using namespace std;

int a[1000005];

int b[1000005];

int lena,lenb;

int next[1000005];

void getnext()

{

int i=0,k=-1;

next[0]=-1;

while(i<lenb)

{

if(k==-1||b[i]==b[k])

{

i++;

k++;

next[i]=k;

}

else

k=next[k];

}

}

int KMP()

{

int i=0,j=0;

getnext();

while(i<lena)

{

if(j==-1||a[i]==b[j])

{

i++;

j++;

}

else

j=next[j];

if(j==lenb)

return i;

}

return -1;

}

int main()

{

int t;

scanf("%d",&t);

while(t--)

{

scanf("%d%d",&lena,&lenb);

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

scanf("%d",&a[i]);

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

scanf("%d",&b[i]);

if(KMP()==-1)

printf("-1\n");

else

printf("%d\n",KMP()-lenb+1);

}

return 0;

}