Problem 2: Are We Civilized?

An archaeological site consists of a set of layers, each of which contains some set of artifacts. By focusing on a particular type of artifact and aspect of that type, *e.g.*, pottery style, a site can be coded as a string of characters, where each character represents an artifact-type aspect and the order of the characters corresponds to how those aspects change over time in the various layers at that site. For example, given pottery-types `a`, `b`, and `c`, a possible coding for a site with 7 layers could be `aabacab`.

Given such encodings, a set of two or more sites could be considered to belong to the same civilization if they have in common some sequence of type-aspects over time. As individual sites in a civilization may go through changes not reflected in other sites, this common sequence may be broken up in the encoding of an individual site, but must still maintain the same temporal order. For example, site-encodings `aaabacab`, `bbcaaba`, and `abbbbacaccbbbc` could all be hypothesized to belong to a common civilization characterized by common sequence `bcab`. The strength of the hypothesis that several sites belong to the same civilization is proportional to the length of the their longest common sequence.

Write a program which, given a set of three site-encodings over the ASCII alphabet and an integer $k > 0$, prints the length of the longest common sequence shared by these site encodings and whether or not this length is greater than or equal to k. An input consisting of $m > 1$ such triples will be a $(4m+1)$-line file, where the first line specifies m each remaining 4-line block specifies k and the site-encodings. You may assume that all input files are formatted correctly and that no site-encoding contains embedded space or tab characters.

Sample input #1 (available as file "test2a.dat"):

```
1
3
aaabacab
bbcaaba
abbbbacaccbbbc
```

Sample output #1:

```
Site-encoding set #1: Same civilization (max common seq-length 4 >= 3)
```

Sample input #2 (available as file "test2b.dat"):

```
3
2
abaaca
abac
cacbabbbca
1
ccc
bbbbb
aaaa
1
cac
bbba
a
```

Sample output #2:

```
Site-encoding set #1: Same civilization (max common seq-length 4 >= 2)
Site-encoding set #2: Not same civilization (max common seq-length 0 < 1)
Site-encoding set #3: Same civilization (max common seq-length 1 >= 1)
```