

Problem X	Simulation Task
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To develop the coding skill, Mr. X gave his students a task to solve the following string manipulation problem.

A string conversion steps are as follows:

**step 1:**

- If a word starts with "x", replace the "x" with "z"
- Change all remaining "x"s to "ks"s

**Step 2:**

- Change all "y"s to "i"s

**Step 3:**

- If a "c" is directly followed by an "e" or "i", change the "c" to an "s".

**Step 4:**

- If a "c" is directly followed by a "k", remove the "c". Keep applying this rule as necessary (Example: "cck" becomes "k")

**Step 5:**

- If a word starts with "sch", change the "sch" to a "sk"
- If a "ch" is directly followed by an "r", change the "ch" to a "k"
- After applying the above rules, change all "c"s that are not directly followed by an "h", to a "k". ( This includes all "c"s that are the last letter of a word.)

**Step 6:**

- If a word starts with "kn" change the "kn" to an "n"

**Step 7:**

- Change all double consonants of the same letter to a single consonant. A consonant is any letter that is not one of "a,e,i,o,u." (Example: "apple" becomes "aple"). Keep applying this rule as necessary (Example: "zzz" becomes "z")

So, as input you are given a string and step number. You have to perform the conversion, step by step beginning from step 1 and output the result after specific step number.

**Input:**

In first line T (  $\leq 1000$ ) number of test cases. Then each test case contains a single line L (  $0 < \text{length}(L) < 1000$ ) and a number S (  $0 \leq S \leq 7$ ) denoting step number.

**Output:**

Print converted string after S step.

Sample Input	Sample Output
<pre>3 i fixed the chrome xerox by the cyclical church 1 cck xzz aaaaa 7 hi all 0</pre>	<pre>Case #1: i fiksed the chrome zeroks by the cyclical church Case #2: k z aaaaa Case #3: hi all</pre>