One of the useful things computers can do is help with the translation of languages. The simplest translators substitute target words of a second language for the original word of a first language. The complex ones try to consider the context of the original words before substituting the target words. In this problem, you will write a simple translator.

Your program will be given a Spanish-to-English dictionary and a series of single-line sentences in Spanish. Your program will parse the Spanish sentence into a sequence of Spanish words and build an English sentence by substituting English words from the dictionary.

For example, consider the following Spanish-to-English dictionary:

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bonita beautiful dos two casa house mayo may nosotros we quiero want una a vamos go yo i
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Given the following statement in Spanish

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yo quiero una casa bonita
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You can use the above dictionary to translate the sentence into English by substituting the English words for the Spanish words:

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i want a house beautiful
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Now you can see a major flaw with this approach, but at least you can get the idea of what was said even though the English sentence is not grammatically correct.

Input

Input to your program consists of a Spanish-to-English dictionary followed by a series of Spanish statements to be translated. Line one of the input file consists of a single integer ($1 \le M \le 1000$) which is the number of Spanish/English word pairs in the Spanish-to-English dictionary. The next M lines each consist of 1 Spanish/English word pair. Each word pair consists of the Spanish word starting in column 1 followed by exactly 1 blank followed by the English word. All words are from 1 to 20 characters in length and are lower case. (The letter "n" will be used in the Spanish words in place of "ñ". Also, two "l"'s will be used rather than the Spanish double—"l")

The rest of the file after the Spanish-to-English dictionary will consist of a series of Spanish statements. Each statement will be on a line by itself with the Spanish words separated from each other by a single space. Every Spanish word appears in the Spanish-to-English dictionary and no statement exceeds 80 characters in length, including the blanks between words.

Output

For each Spanish statement, your program should print the equivalent English statements to the screen. Words in each English statement should be separated by exactly one space. No translated statement will exceed 80 characters in length, including the blanks between words.

Example: Input File

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bonita beautiful pelo hair dos two nosotros we casa house yo i todas all de of los the muchachos boys tienen have mayo may hambre hunger una a cafe brown es is quiero want vamos go mi my yo quiero una casa bonita todas de los muchachos tienen hambre mi pelo es cafe

Output to screen

i want a house beautiful
all of the boys have hunger
my hair is brown