Find Your Easter Bunny Name (prob4)

The Problem

Every spring in Macon, GA, the local family life radio station, WJTG 91.3 FM, comes out with a list of “bunny names” for everyone just in time for the Easter season. Your job is to write a program to input this year’s list of names and then convert a series of one or more real names into their corresponding Easter bunny names.

To convert a real name to an Easter bunny name, you take the first letter from the real first name and look up in a table the new bunny first name. You would then take the first letter of the real last name and look up its corresponding bunny last name. Join these together to form the new Easter bunny name. Here is a sample table.

Input

Input will begin with 26 lines. Each line contains: a capital letter, followed by a space, followed by a bunny first name that will replace real first names that start with that letter. The next 26 lines will be in the same format, but specify bunny last names that will replace real last names. You may assume both sets of 26 lines are sorted by capital letter in ascending order. These 52 lines are followed by a line of input that contains a single integer n, ($1 \leq n \leq 1000$), which is the number of real names that follow.

Each real name consists of a single line of input containing two strings separated by a single space representing the real first & last name. Each real first & last name is a string of length k, ($1 \leq k \leq 70$) and contains only letters. The first letter of each real first & last name to be input will always be capitalized.

Output

For each real name in the input, output a line containing: the real name, followed by " = " (space,equals,space), followed by the bunny name resulting from the replacements specified in the first 52 lines of input. There should be only one space between all of the individual string tokens exactly as shown below. You will receive a presentational error if you have multiple spaces between individual string tokens or the equal sign.

Sample Input

```
A Lily
B Whisper
C Candy
D Clumsy
…
Y Sweet
Z Lucky
A Lemon Drop
B Bunny Hop
C Doodles
D Marshmallow
…
Y Choco Latte
Z Kid
2
Bob Allen
LeBron James
```

Sample Output

```
Bob Allen = Whisper Lemon Drop
LeBron James = Wild Sugar Cakes
```