

Spanish Conjugation

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As you want to go to Madrid, maybe now would be the right time to learn some Spanish grammar? Of course, as a programmer, one way to do so is to write a program that teaches you. In this task, you are required to write the part of a grammar trainer that checks whether you conjugated a verb correctly.

In Spanish, there are three forms of regular verbs: Those ending in -ar, -er and -ir. The verb forms are build according to the following table:

	-ar		-er		-ir	
	Singular	Plural	Singular	Plural	Singular	Plural
First person	-o	-amos	-o	-emos	-o	-imos
Second Person	-as	-Ais	-es	-Eis	-es	-Is
Third Person	-a	-an	-e	-en	-e	-en

As an example, the word comer (to eat) in second person singular would be the stem (com) and the ending (es): comes, you eat. Note that the pronoun tu (you) is implicit; unlike English, the person can be derived from the verb alone.

In order to avoid compatibility problems between computers of different character encodings, we substituted some letters. Throughout this problem, we will write A instead of á, E instead of é and I instead of í. All other non-ASCII characters have been replaced by their normalized version (e.g. ñ → n).

Input

The input contains of several test cases. Each test case consists of a verb conjugation.

Each conjugation consists of the infinitiv of a verb, a comma, the person (first, second, third person), the number (singular or plural), a colon and the conjugated verb form. Only regular verbs will occur.

Output

For each test case, print either "correct" or "incorrect, should be ____" (where ____ is replaced with the correct conjugation).

Example

Input:

hablar, first person singular: hablo

beber, second person plural: bebEis

comer, first person plural: comemas

vivir, third person singular: vive

Output:

correct

correct

incorrect, should be comemos

correct