

CJ3 | Gacha

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Description

Transponder snail (also known as the Den Den Mushi) are a class of telepathic snail that serves as a means of vocal and/or visual communication across the world. There exists various transponder snail species which specialize in different types of signals. Believing that danger may struck his pirate crew in the near future, CJ has instructed you as the ship's programmer to create a program which can store someone's transponder snail number.

Input Format

Input consists of 3 sections.

- Section 1 is the list of contacts. Given an integer **c**, the next **c** lines are contacts. Each line of contact consists of an integer **ID** as the phone number and string **name** as the person who has that **ID**. Each contact can contact multiple other **ID**'s.
- Section 2 is the list of relations. Given an integer **r**, the next **r** lines consists of two **ID**'s, **ID_A** and **ID_B**. This means that person with **ID_A** can contact **ID_B** directly as well as vice versa.
- Section 3 is the testcases. Given an integer **t**, the next **t** lines consists of two **ID**'s, **ID_A** and **ID_B**. Determine if person with **ID_A** can contact **ID_B** (or vice versa), either directly or through some other people.

Output Format

For each testcases, print the following:

- If person with **ID_A** can contact **ID_B** (or vice versa), either directly or through some other people, print {person_A} can reach {person_B} where {person_A} is the name of contact with **ID_A** and {person_B} is the name of contact with **ID_B**.
- If not then We need more transponder snails must be printed.

Constraints

$0 \leq \text{ID} < 20$

String **name** with a length no more than 30, does not have any whitespace

It is guaranteed that **ID_A** is not equal to **ID_B**.

Example 1

Input
<pre> 4 0 vegapunk 1 CJ 2 AJ 3 MJ 2 1 2 2 3 3 1 2 1 3 0 3 </pre>
Output
<pre> CJ can reach AJ CJ can reach MJ We need more transponder snails </pre>
Explanation
<p>Testcase 1</p> <p>ID1 (CJ) can reach ID2 (AJ) directly</p> <p>Testcase 2</p> <p>ID1 (CJ) can reach ID3 (MJ) through ID2 (AJ)</p> <p>Testcase 3</p> <p>ID0 (vegapunk) cannot reach anyone</p> <p><i>*observe the graph below</i></p>

