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Practice problems aimed to improve your coding skills.

-  PRACTICE-02_SCAN-PRINT
-  PRACTICE-03_TYPES
-  LAB-PRAC-02_SCAN-PRINT
-  LAB-PRAC-01
-  PRACTICE-04_COND
-  BONUS-PRAC-02
-  LAB-PRAC-03_TYPES
-  PRACTICE-05_COND-LOOPS
-  LAB-PRAC-04_COND
-  LAB-PRAC-05_CONDLLOOPS
-  PRACTICE-07_LOOPS-ARR
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-  LAB-PRAC-07_LOOPS-ARR
-  LABEXAM-PRAC-01_MIDSEM
-  PRACTICE-09_PTR-MAT
-  LAB-PRAC-08_ARR-STR
-  PRACTICE-10_MAT-FUN
-  LAB-PRAC-09_PTR-MAT
-  LAB-PRAC-10_MAT-FUN
-  PRACTICE-11_FUN-PTR
-  LAB-PRAC-11_FUN-PTR
 -  Name the Clones
 -  The Race of the Clones
 -  Partial Palindrome
 -  Growth Curve
 -  The Family Tree of Mr C
 -  Timely Tasks
 -  Plenty of Palindromes
 -  Count and Say Sequence
 -  Orbiting Indices
 -  Zig-zag Numbers
 -  Parent Palindrome
 -  Leaderboard
-  LAB-PRAC-12_FUN-STRUC
-  LABEXAM-PRAC-02_ENDSEM
-  LAB-PRAC-13_STRUC-NUM
-  LAB-PRAC-14_SORT-MISC

The Family Tree of Mr C

LAB-PRAC-11_FUN-PTR

The Family Tree of Mr C [20 marks]

Problem Statement

Believe it or not, Mr C too has parents, grandparents, and higher ancestors, and is quite a darling to them. In this problem, we will get to meet some of them. All of Mr C's ancestors have names that are strictly positive integers. These will be given to you in a certain format. In the first line of the input, you will be given n , a strictly positive integer. In the second line of the input, you will be given n strictly positive integers, separated by a space. These represent the names of n of Mr C's ancestors. Store these names in an array called `names`. Below we tell you how these names are arranged.

1. `names[0]` is the name of Mr C's mother
2. `names[1]` is the name of Mr C's father
3. For any index i , the index $2*(i+1)$ stores the name of the mother of the person at index i
4. For any index i , the index $2*(i+1) + 1$ stores the name of the father of the person at index i

Thus, the index 4 stores the name of Mr C's father's mother, i.e. Mr C's grandmother and index 6 stores the name of Mr C's mother's mother's mother i.e. Mr C's great grand mother.

In the third line of the input, we will give you four strictly positive integers, separated by a space, which are supposed to be names of Mr C's ancestors. For each name, you have to print one of the following messages, on separate lines.

1. If the name does not appear at all in the list, print "NO RELATIONS" (without quotes)
2. If the name appears more than once in the list, print "MULTIPLE RELATIONS" (without quotes)
3. If the name appears just once in the list, print the relation that person has with Mr C. The relation must be printed in ALL CAPITAL letters, as shown in the example below.

Caution

1. Be careful to count how "grand" a certain ancestor is e.g. is the person a great grand parent or a great great grand parent?
 2. Hint: even indices always store names of "mothers" and odd indices always store names of "fathers".
 3. Be careful about extra/missing lines and extra/missing spaces in your output.
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EXAMPLE:

INPUT

10

1 2 3 4 5 6 7 8 9 10

1 5 7 10

OUTPUT:

MOTHER

GRAND MOTHER
GREAT GRAND MOTHER
GREAT GRAND FATHER

Explanation:

1. index 0 is mother
2. index 4 is father's mother
3. index 6 is mother's mother's mother
4. index 9 is mother's father's father

Grading Scheme:

Total marks: **[20 Points]**

There will be partial grading in this question. There are four lines in your output. Printing each line correctly, in the correct order, carries 25% weightage. Each visible test case is worth 2 points and each hidden test case is worth 4 points. There are 2 visible and 4 hidden test cases.

Please remember, however, that when you press Submit/Evaluate, you will get a green bar only if all parts of your answer are correct. Thus, if your answer is only partly correct, Prutor will say that you have not passed that test case completely, but when we do autograding afterwards, you will get partial marks.

 **Start Solving! (/editor/practice/6219)**