Problem D: Can you Dig It?

The Pewter Museum of Science in Kanto is holding a treasure hunt for young Pokemon trainers. The hunt consists of an 8x8 plot of land. In one of the sections, is buried a Pokemon fossil, a rare prize.

In each of the other 63 sections, is a piece of paper with a 2-digit number written on it. This number is a clue directing the trainer to the next section of land to search. The tens digit indicates the row number, and the ones digit indicates the column number.

Participants in the treasure hunt start in the first section (row 1, column 1) and follow the clues until they either find the fossil, or go back to a section of land they have already searched. Your goal is to write a program which, given what's buried in each section of land, will determine whether or not the participants will find the fossil.

Input

Input will consist of 8 lines. Each line corresponds to a row in the plot of land, and contains 8 entries. Each entry is either a two-digit number indicating the cell of the next clue, or the value 0 which indicates that the cell contains the fossil.

You can assume that no clue will refer to a non-existent cell.

Output

Your program should output output the cell numbers that are searched at each step. If the participant finds the fossil, you should end by printing "Found the fossil!". If the participant is sent back to search a section that they have already searched, you should print "Fossil not found!".

Sample Input

```
31 21 66 12 52 87 64 44
11 13 78 17 44 51 36 33
76 44 12 54 84 71 12 33
24 53 15 68 58 0 14 88
22 44 61 11 87 0 28 64
88 22 43 43 54 17 42 81
56 23 0 11 17 24 56 71
61 19 21 82 39 0 77 27
```

Sample Output

```
11
31
76
24
17
64
43
15
52
44
68
81
61
88
27
36
71
56
Found the fossil!
```