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**Pillars****P85783\_en**

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The world-famous architect Mr. Fruí from Reus is planning to build a colossal pillar  $H$  units high. Mr. Fruí has  $n$  black pieces with heights  $b_1, \dots, b_n$ , and  $m$  white pieces with heights  $w_1, \dots, w_m$ . According to his design, the pillar must have four pieces: a black piece at its bottom, a white piece above it, another black piece above, and finally a white piece at the top of the pillar.

Mr. Fruí wishes to know which combination of four pieces with total height  $H$  is the most stable. Given two combinations  $A = [a_1, a_2, a_3, a_4]$  and  $B = [b_1, b_2, b_3, b_4]$  (where  $a_1$  denotes the height of the bottom (black) piece of the pillar  $A$ ,  $a_2$  denotes the height of the second (white) piece of  $A$ , and so on), we say that  $A$  is more stable than  $B$  if  $a_1 > b_1$ , or if  $a_1 = b_1$  but  $a_2 > b_2$ , etc. In other words,  $A$  is more stable than  $B$  if and only if the sequence of heights of the pieces of  $A$  is lexicographically larger than the sequence of heights of the pieces of  $B$ .

Write a program such that, given the desired height  $H$  of the pillar, the heights of the black pieces and the heights of the white pieces, computes which pillar (if any) of height exactly  $H$  would be the most stable.

**Input**

Input consists of several cases, each in three lines. The first line has  $H$ , an integer number between 1 and  $4 \cdot 10^8$ . The second and third lines consist respectively of  $b_1, \dots, b_n$  and of  $w_1, \dots, w_m$ . A blank line separates two cases. Assume  $2 \leq n \leq 1000$  and  $2 \leq m \leq 1000$ , and that no piece has a height larger than  $10^8$ .

**Output**

For every case, print the sequence of heights of the pieces of the most stable pillar, from bottom to top. If no solution exists, print "no solution".

**Sample input 1**

```
100
20 20
30 10 30 50

100
20 10 4
50 30 45
```

**Sample output 1**

```
20 50 20 10
no solution
```

**Problem information**

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