**Is Bigger Smarter**

Some people think that the bigger an elephant is, the smarter it is. To disprove this, you want to take the data on a collection of elephants and put as large a subset of this data as possible into a sequence so that the weights are increasing, but the IQ’s are decreasing.

**Input**

The input will consist of data for a bunch of elephants, one elephant per line, terminated by the end of-file. The data for a particular elephant will consist of a pair of integers: the first representing its size in kilograms and the second representing its IQ in hundredths of IQ points. Both integers are between 1 and 10000. The data will contain information for at most 1000 elephants. Two elephants may have the same weight, the same IQ, or even the same weight and IQ.

**Output**

Say that the numbers on the i-th data line are W[i] and S[i]. Your program should output a sequence of lines of data; the first line should contain a number n; the remaining n lines should each contain a single positive integer (each one representing an elephant). If these n integers are then it must be the case that

and

In order for the answer to be correct, n should be as large as possible. All inequalities are strict: weights must be strictly increasing, and IQs must be strictly decreasing.

There may be many correct outputs for a given input, your program only needs to find one.

**Sample Input**

6008 1300

6000 2100

500 2000

1000 4000

1100 3000

6000 2000

8000 1400

6000 1200

2000 1900

**Sample Output**

4

4

5

9

7