Southeastern European Regional Programming Contest Bucharest, Romania
October 20, 2001

## Problem C

Secret Numbers

## Input File: C.DAT

Program Source File: C.PAS or C.C or C.CPP
Two natural numbers $\mathbf{a}$ and $\mathbf{b}$ are chosen $(1<\mathbf{a}<\mathbf{b})$. Person $M$ is told the multiple of $\mathbf{a}$ and $\mathbf{b}$ $\left(\mathbf{a}^{*} \mathbf{b}\right)$, and person $S$ is told the sum of $\mathbf{a}$ and $\mathbf{b}(\mathbf{a}+\mathbf{b})$. The discussion between M and S goes like this:

M : I do not know the numbers $\mathbf{a}$ and $\mathbf{b}$.
S: I do not know them either, but I knew you would not know them.
M: Now I know the numbers!
S: Now I know them, too!
Input: The input is given in a text file. The input file contains pairs of natural numbers $\mathbf{x}$ and $\mathbf{y}(2<=\mathbf{x}<\mathbf{y}<=550)$, one pair per line. The input is guaranteed to be correct.

Output: For each pair $\mathbf{x}, \mathbf{y}$, find all pairs of $\mathbf{a}$ and $\mathbf{b}$, such that $\mathbf{x}<=\mathbf{a}<\mathbf{b}<=\mathbf{y}$ and that the given discussion is possible. Write these pairs in a single line, and finish that line with "no more pairs." if there are $\mathbf{a}$ and $\mathbf{b}$ found in the given range, or write simply "no pairs." if there are not. Separate the numbers of a pair with a comma, terminate each pair with a semi-colon, and separate different pairs with a blank after the semi-colon, as shown in the example below.

## Example:

| input | output |
| :--- | :--- |
| 210 | no pairs. |
| 220 | 4,$13 ;$ no more pairs. |

