1 Triangles Can Form

Given a number (N) of lines (extending to infinity) in both directions are drawn on a plane. The lines are specified by the angle (positive or negative) made with the x axis (in degrees). It may be assumed that the different lines are not coincident (they do not overlap each other) and that no three of them are concurrent (no three of them pass through the same point).
The objective is to determine the number of triangles formed by the a set of these lines
If the lines are given with an angle of 10, 70, 30 and 30.

L1 is at 10 degrees to the x axis, L2 is at 70 degrees to the x axis, L3 and L4 are at 30 degrees to the x axis. It can be seen that there are two triangles (L1,L2,L3 and L1,L2,L4). L3 and L4 do not meet as they are parallel.

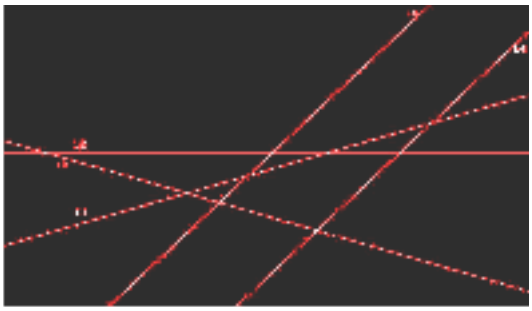
Constraints
N<=50
-89 <= angle for any line <=90

Input Format
The first line of the input consists of a single integer, N.
The next line consists of a series of integers (positive, zero or negative), each corresponding to a separate line, and giving the angle that it makes with the x axis (measured in degrees and in anticlockwise direction).

Output Format
The output is a single integer giving the number of triangles formed by the lines

Input/Output

Input	Output	Explanation
4 20,-20,40,106	Invalid Input Angles	Explanation : Invalid Input Angles -89 <= angle for any line <=90

5 20,-20,0,50,50	7	**Input Explanation :** 1) First Line 5 indicates the number lines 2) Second line indicates a series of integers each corresponding to a separate line. **Output Explanation :** **There are 5 lines, with angles at 20,-20,0, 50 and 50 degrees with the x axis. The figure looks like this**  **There are 7 triangles, those formed by (L1,L2,L3),(L1,L2,L5), (L1,L2,L4), (L1,L3,L4), (L1,L3,L5), (L2,L3,L5), (L2,L3,L4). Hence the output is 7.**
51 20,-20,0,40,40	Invalid Input N	**Explanation :** Invalid N Value **N<=50**

2 Which King is in Danger

Imagine a chessboard in which white pieces (always at the bottom) and black pieces (always at the top)are represented by capital and small letters respectively. So, the King, the Queen, the Bishop, the Knight, the Rook and Pawns are represented as K or k, Q or q, B or b, N or n, R or r and P or p. Upper case white and lower case black.
These pieces follow movements as per the standard rules of chess games.

The chessboard is configured with hyphens (-) to represent empty squares and different pieces (uppercase or lowercase letters).

Write a program to read the final state of a board configuration and probe if King (either White or Black)
under threat- If the either kings are not in threat then print all is well.
For board configuration you must output one of the following ans:
white king in danger
black king in danger
all is well

Input/Output

Input	Output	Explanation
---k---- ppp-pppp -----b-- ---R---- -------- -------- P-PPPPPP K-------	white king in danger	**Input Explanation :** 8 rows and 8 column grid as input **Output Explanation :** **White King** is in danger with **Blank Bishop**
--k----- ppp-pppp ------b- ---R---- -------- -------- P-PPPPPP K-------	all is well	**Black and White Kings are Safe**

3 Biggest Integer

The casino has introduced a new game in which there are M vertical chutes each containing N single digit (possibly zero) numbers.

You can choose any chute and draw the bottom number and when you do this all the other numbers in the chute descend by one slot. You need to build the largest integer using this process drawing all the numbers from the chutes.

Given the number of chutes and the numbers in each chute, write a program to find the largest integer that could be formed using the above process.

Constraints

1 <= M <= 20, 1 <= N <= 50

Input Format :

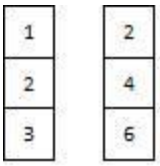
First line contains M,N two comma separated integers giving the number of chutes and the number of digits in each chute

The next M lines each contain N comma separated digits, giving the digits from top to bottom in each of the chutes.

Output Format :

One line containing the largest integer that could be formed.

Input/Output

Input	Output	Explanation
2,3 **1,2,3** **2,4,6**	**643221**	**M is 2** and **N is 3** (there are 2 chutes with 3 digits in each). The chutes look like this  The largest integer that can be formed is **643221**
28,2 **7,5** **4,8**	**Invalid Input**	**1 <= M <= 20, 1 <= N <= 50**