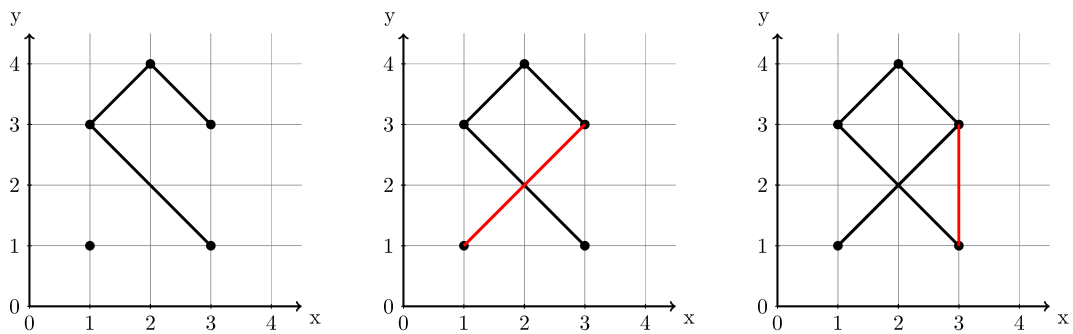
Problem H
Hoang & Vuong

Hoang and Vuong are excellent students. They have won many prizes in coding competitions. Today, they are playing a game of *points and polygons*.

At the begining, there are n given points on the Cartesian plane. These points are numbered from 1 to n. The ith point has coordinates (x_i, y_i). Among them, no 3 points are collinear.

Initially, there are no line segments on the plane. Hoang and Vuong take alternative turns. In each turn, a player selects 2 given points that are not directly connected by a line segment and draw a line segment between them. If a player does not have any valid moves, the other one is the winner of the game. After a player's turn, if he creates a *convex polygon* whose vertices are among the original n points, he is the winner of the game.



In the example above, the first figure shows a state of a game with 5 points $(1, 1)$, $(1, 3)$, $(2, 4)$, $(3, 1)$, $(3, 3)$ after 3 moves.

In the 4th turn, Vuong connects $(1, 1)$ and $(3, 3)$. Note that, the created square (whose vertices are $(1, 3)$, $(2, 2)$, $(3, 3)$, $(2, 4)$) is not counted because $(2, 2)$ is not a given point. Hence, the game still continues after this turn.

In the 5th turn, Hoang connects $(3, 3)$ and $(3, 1)$. This time, a new convex polygon $(1, 3)$, $(3, 1)$, $(3, 3)$, $(2, 4)$ appears. All vertices of this polygon are among the n given points, thus the game ends and Hoang is the winner.

Assuming that both Hoang and Vuong play optimally and Hoang plays first, your task is to identify the winner of the game.

Input

The first line of the input contains t — the number of testcases ($1 \le t \le 100$). Then t testcases follow, each is presented in the following format.

- The first line contains an integer n — the number of points ($2 \le n \le 64$).
- The next n lines, each contains 2 integers x_i and y_i ($0 \le |x_i|, |y_i| \le 10^6$).

Output

For each test case, output in one line the winner of the game (either `Hoang` or `Vuong`).

Sample Input 1	Sample Output 1
1 3 0 2 2 0 2 2	Hoang