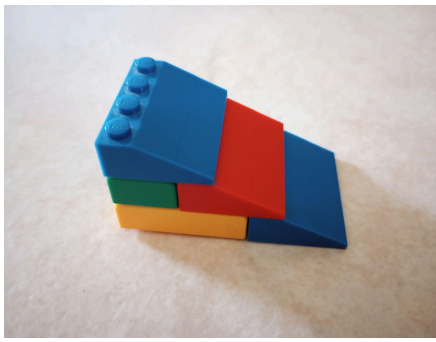
Problem E: Lego Ramp

Filename: `ramp`

Time limit: `4 seconds`



Brygida was enjoying making a tall ramp out of legos, when the ramp suddenly collapsed! Brygida thinks this probably has to do with the fact that she placed her heaviest lego blocks on the top of the ramp. Brygida has drafted up new plans to build a lego ramp, but first she needs you to tell her if her new tower would just collapse again!

Problem

Given weight of each block in a triangular lego ramp, report if any block has a weight greater than the sum of the weight of the block directly below it and the block directly to the right of the block below it.

Input

Input will begin with a single integer **c** representing the number of test cases.

Each test case begins with a single integer, **l**, indicating the number of levels in the lego ramp. The next **l** lines contain a space-separated list of integers $\mathbf{p}_{i1}$ through $\mathbf{p}_{ii}$. The i^{th} line contains i integers, and represents the i^{th} level from the top.

Output

If the weight of any given block is greater than the sum of the weight of the block directly below it and the block directly to the right of the block directly below it, then output “unstable” (quotes added for clarity). Otherwise, output “stable” (quotes added for clarity).

Input Bounds and Corresponding Credit

100 Points
• $1 \leq \mathbf{c} \leq 15$ • $1 \leq \mathbf{l} \leq 1000$ • $1 \leq \mathbf{p} \leq 10^7$

Samples

Input	Output
2 3 8 6 7 4 2 5 3 8 6 7 3 3 3	stable unstable