Round D APAC Test 2017

A. Vote

B. Sitting

C. Codejamon Cipher

D. Stretch Rope

Questions asked

Submissions

Vote

5pt | Not attempted **1360/2559 users** correct (53%)

8pt | Not attempted **913/1257 users** correct (73%)

Sitting

9pt | Not attempted **683/1467 users** correct (47%)

10pt | Not attempted **305/472 users** correct (65%)

Codejamon Cipher

7pt | Not attempted **653/819 users** correct (80%)

16pt | Not attempted **348/624 users** correct (56%)

Stretch Rope

15pt | Not attempted **477/655 users** correct (73%)

30pt | Not attempted **36/146 users** correct (25%)

Top Scores

jinzhao	100
axp	100
wcwswswws	100
t3cmax	100
prabowo	100
ZJiaQ	100
BoyZhou	100
sgtlaugh	100
YeYifan	100
shyoshyo	100

Problem B. Sitting

This contest is open for practice. You can try every problem as many times as you like, though we won't keep track of which problems you solve. Read the Quick-Start Guide to get started.

Small input
9 points
Solve B-small

Large input
10 points
Solve B-large

Problem

The ***Codejamon*** game is on fire! Many players have gathered in an auditorium to fight for the World Championship. At the opening ceremony, players will sit in a grid of seats with **R** rows and **C** columns.

The competition will be intense, and the players are sensitive about sitting near too many of their future opponents! A player will feel too crowded if another player is seated directly to their left *and* another player is seated directly to their right. Also, a player will feel too crowded if one player is seated directly in front of them *and* another player is seated directly behind them.

What is the maximum number of players that can be seated such that no player feels too crowded?

Input

The first line of the input gives the number of test cases, **T**. **T** test cases follow. Each test case consists of one line with two integers **R** and **C**: the number of rows and columns of chairs in the auditorium.

Output

For each test case, output one line containing `Case #x: y`, where x is the test case number (starting from 1) and y is the maximum number of players that can be seated, as described in the problem statement.

Limits

$1 \leq \mathbf{T} \leq 100$.

Small dataset

$1 \leq \mathbf{R} \leq 5$.
$1 \leq \mathbf{C} \leq 5$.

Large dataset

$1 \leq \mathbf{R} \leq 100$.
$1 \leq \mathbf{C} \leq 100$.

Sample

Input	Output
3 2 2 2 3 4 1	Case #1: 4 Case #2: 4 Case #3: 3

In sample case #1, we can fill all seats, and no player will feel too crowded.

In sample case #2, each row has three seats. We can't put three players in a row, since that would make the middle player feel too crowded. One optimal solution is to fill each of the first two columns, for a total of four players.

In sample case #3, one optimal solution is to fill the first two rows and the last row, for a total of three players.

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