

SPOJ Problem Set (main)

4608. Avtomat

Problem code: CSMS0106

Avtomatyn orolt ruu N bolon M urttaj khoër tuuz ordog. Edgeer tuuz b ?r deer khargalzan N bolon M širkheg toonuud bajna. Garalt deer n ’ $N+M$ širkheg too garna. Ug avtomat n ’ daraakh bajdlaar ažiłłana:

- KHerev al’ neg tuuzyg unšiž duussan bol n ?g?? tuuzan deer ?ldsen toonuudyg gargaad ažiłaa duusgana.
- KHerev khoër tuuz khoëulaa duusaag?j bajval ižił magadlaltajgaar al’ neg tuuzan deerkh neg toog khevlene. ??nij daraa khargalzakh tuuzyg neg bajrlalaar šiłž??łne.

Žiše n ’ orolt deer (1,2,3) ba (1,3,4) gesen daraalluud tuuzan deer orž irsen gevel avtomatyn garalt deer daraakh daraalluudyn al’ neg n ’ garna: (1,1,2,3,3,4), (1,1,2,3,4,3), (1,1,3,2,3,4), (1,1,3,2,4,3), (1,1,3,4,2,3), (1,2,1,3,4,3), (1,2,1,3,3,4), (1,2,3,1,3,4), (1,3,1,2,3,4), (1,3,1,2,4,3), (1,3,1,4,2,3), (1,3,4,1,2,3).

Input

Ekhniij m ?r?nd N , M khoër b ?khel too ?g?gd?n? ($1 \leq N \leq 100$, $1 \leq M \leq 100$).

KHoër dakh’ m ?r?nd N širkheg b ?khel toonuud ?g?gd?kh ba ene n ’ ekhniij tuuzan deerkh toonuud yum.

Gurav dakh’ m ?r?nd M širkheg b ?khel toonuud ?g?gd?kh ba ene n ’ khoër dakh’ tuuzan deerkh toonuud.

Tuuzan deerkh toonuud moduliaraa 10^6 - ees khetrekhg?j.

Output

Avtomat kheden âłgaataj garalt gargaž bolokhyg ilerkhijlekh neg b ?khel toog gargana.

Example

Input: 3 31 2 31 3 4 **Output:** 12

Added by: Khuder

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Time limit: 2s

Source limit: 50000B

Languages: All