



Challenge: The Braithwaite Confront

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Difficulty: Easy

Submission Constraints:

- Time limit per test: **0,02 seconds**
- Memory limit per test: **Default (65 MB)**

Description

Dutch and the gang are planning to confront the Braithwaite family. The gang decides to move their camps located at different points on the map to Shady Belle to establish a more secure position before confronting the Braithwaites. During this time, the gang works together to relocate their supplies.

The map is represented as a matrix with n rows and m columns. The gangs have $n * m$ camp, each camp has a group of soldiers responsible for moving assets, and it takes 1 hour to move assets from one camp to another. Dutch and the gang want to determine the minimum hours required for all supplies to be moved to the Shady Belle camp if they move optimally

Inputs

The input line contains four space-separated integers:

- n : number of map rows
- m : number of map colognes
- r : the row number of the Shady Belle camp
- c : the column number of the Shady Belle camp



Output

the minimum hours required for all supplies to be moved to Shady Belle camp

Examples

Input	Output
15 20 4 7	24