

4: Cutting Cookies

Level: Easy

Time limit: 1 second

The students of **via** all got some special cookies from IMC (no, not the kind that tracks, but the kind Erik can eat). However, **via** got one per two persons, so in order to make it fair the board invented a way to divide the cookies. The cookies that **via** got are rectangular with a dark/white chocolate flavour pattern. The duo Erik and Collin needs to share, but they both only like dark chocolate and hate white chocolate. So both of them wants as much dark chocolate flavoured cookie as they can, while obtaining as less white chocolate as possible. A dark chocolate cookie piece earns them, 1 meaningless unit of happiness, and a piece of white chocolate cookie lowers their happiness by 1. Even though Erik and Collin are good friends, the goal of Erik is to maximize the difference between his obtained happiness and Collin his obtained happiness.

The way of dividing the cookie works as follows: Two of the board members place a $p \times q$ -rectangle of the aforementioned cookie on the table. Erik is at the west side of the table and Collin is at the south side of the table. The side of length p is parallel to the north-south line, while the side of length q is parallel to the east-west line. The north-west square is made of dark chocolate flavoured cookie. Erik starts with breaking off any positive number of columns at the west side, after which Collin can break off any positive number of entire rows from the south side. This is repeated until the complete cookie is divided. Collin is very smart and will always play perfectly.

A game might proceed like this, for example: Erik and Collin start with a 3×4 -rectangle. Erik decide to break off 2 columns, obtaining 3 dark and 3 white chocolate squares, netting a happiness of zero. Collin then breaks off 1 row, obtaining 1 dark and 1 white squares as well, so no happiness for him either. Erik then take a single column, which nets Erik nothing again, after which Collin decides to break off one row, which nets him 1 happiness! Erik then take the last piece, which makes Erik lose a unit of happiness, so your total score is $-1 - 1 = -2$. See the figure. (Note: the strategies used here might not be optimal.)

Input

Given is one line with two positive integers p and q . Both at most 100, which are the height and width of the cookie rectangle

Output

Output is the largest difference of happiness between Erik and Collin.

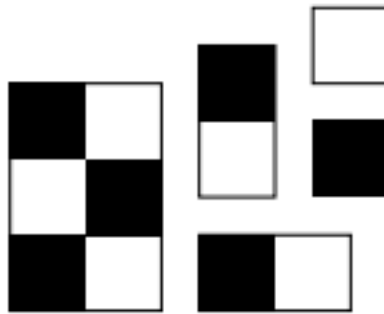


Figure 1: The example game described in the problem statement.

Sample input 1

1 9

Sample input 2

2 4

Sample input 3

7 10

Sample output 1

1

Sample output 2

0

Sample output 3

2