Perica was always very good at math. His only weak points were addition and division. To help him with that, his teacher presented him with the following problem.

She gave him a 2 by 2 table, containing **positive** integers **A**, **B**, **C** and **D**.

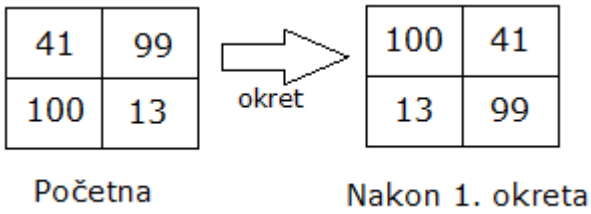
A	**B**
C	**D**

We say that the **value** of a table is equal to:

$$\frac{A}{C} - \frac{B}{D}$$

Perica's task is to find the **minimum** number of 90 degrees clockwise rotations required to maximize the value of a given table.

Result of a single clockwise rotation is shown below.



INPUT

The first line of input contains two space separated integers, **A** and **B**.

The second line of input contains two space separated integers, **C** and **D**.

All integers are **positive** and not greater than 100.

OUTPUT

The first and only line of output must contain a single integer, minimum number of clockwise rotations required to maximize the table's value.

SAMPLE TESTS

input 1 2 3 4 **output** 2	**input** 5 9 7 2 **output** 0	**input** 41 99 100 13 **output** 1