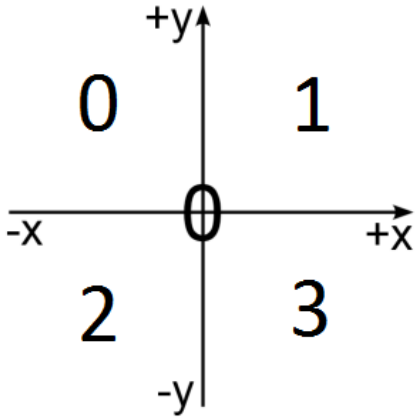
Bonus Problem – Cartesian Coordinate System

You are given a two-dimensional Cartesian coordinate system and the two coordinates (**X** and **Y**) of a point in the coordinate system. **X** and **Y** are non-zero numbers. If you don't know what Cartesian coordinate system is Google it with Bing. As you will find, the coordinate system is divided by 2 lines (see the picture bellow) which divide the plain in four parts. Each of these parts has a lot of points that are numbered between 0 and 3. There is one point where our lines are crossing. This point has the following coordinates: X=0 and Y=0. As a result this point is numbered 0 on the picture below.

Your task is to write a program that finds the number of the location of the given point in the coordinate system with **maximum 54 characters in your source code**.



Input

Input data is being read from the console.

The number **X** is on the first input line.

The number **Y** is on the second input line.

The input data will always be valid and in the format described. There is no need to check it explicitly.

Output

The output data must be printed on the console.

On the only output line you must print an integer number between 0 and 3, depending on the location of the given point in the coordinate system.

Do not write new line on the final result.

Constraints

- The numbers **X** and **Y** are non-zero numbers between -1 000 and 1 000, inclusive.
- Allowed source code length: 54 characters
- Allowed working time for your program: 0.10 seconds.
- Allowed memory: 16 MB.

Examples

Input Example	Output Example
-1 -2	2
1 -2	3
-1 2	0
1 2	1