Adventure in Flatland

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	512 megabytes

Flatland is a two-dimensional plane. Points with both coordinates different from zero are called *free*. Points with at least one zero coordinate are called *custom* points; when passing through these points one should pay 1 flatland dollar as a fee.

Adventurer stands at the free point with integer non-zero coordinates x_1 and y_1 and the goal of his adventure is to reach the free point with non-zero coordinates x_2 and y_2. He is allowed to choose any route he wants. Calculate minimum possible fee to be paid by adventurer.

Input

Input contains four integers x_1, y_1, x_2 and y_2 — coordinates of the start point and the finish point respectively ($x_1 \neq 0$, $y_1 \neq 0$, $x_2 \neq 0$, $y_2 \neq 0$, $-10\,000 \leq x_1, y_1, x_2, y_2 \leq 10\,000$).

Output

Print minimum possible fee in flatland dollars to be paid by adventurer.

Examples

standard input	standard output
25 11 -20 -20	1
20 20 20 21	0