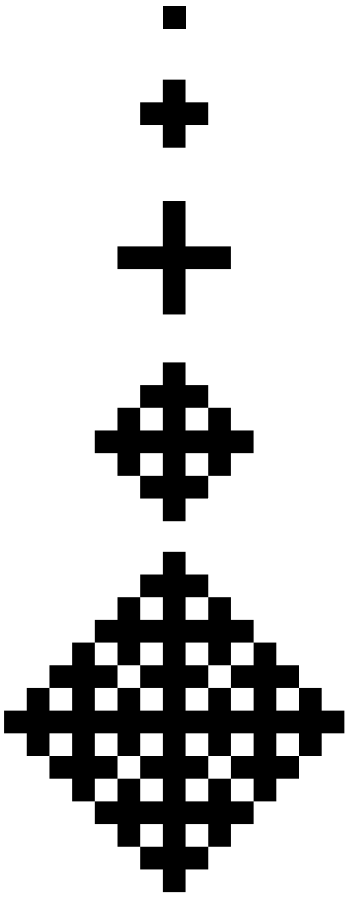

2017 KEEP ON THE GRASS

An aerial view of the terrain upon which the villages comprising *The Endians* lie shows an intricate patchwork, a rectangular grid of sunny spots of greenery. Originally entirely barren, tradition has it that a single square of grass was planted when the first village was founded. As each night turned to day, any square adjacent (horizontally or vertically) to exactly one grassed square sprouted grass itself. A mere seven centuries for miles of fertile ground to be born.

The original square of grass was planted at co-ordinate (0,0). Starting from any square of grass it is possible to reach the original square, moving only horizontally or vertically to grass covered squares. Given a grassed starting square, determine how many squares are included in the shortest path to reach the original square.

The figures on the left show the grass on days 1, 2, 3, 4 and 8.

Hint: On day 2^n ($n \geq 0$) the grass fills a diamond shape.

For example:

- (1,0) touches (0,0) so 2 squares are on the path from (1,0) to (0,0);
- The path from (2,1) is 4 squares (2,1)→(2,0)→(1,0)→(0,0);
- The path from (3,2) is (3,2)→(4,2)→(4,1)→(4,0)→(3,0)→(2,0)→(1,0)→(0,0).

SAMPLE INPUT

3 −2

SAMPLE OUTPUT

8

The first line of input will consist of two integers, indicating a grassed square that exists on day 2^{18} by its X then Y co-ordinate.

You should output a single integer, the number of grassed squares traversed in the shortest path from (X,Y) to (0,0).