Problem A. Circles

Input file:	*standard input*
Output file:	*standard output*
Time limit:	1.5 seconds
Memory limit:	256 mebibytes

There are N circles on a plane. The center of the i-th circle is (x_i, y_i), and the radius of this circle is $\sqrt{x_i^2 + y_i^2}$.

Count the number of lattice points (points with integer coordinates) that are inside at least one of the circles. Note that the boundaries are considered to be inside.

Input

Input format:

N
x_1 y_1
x_2 y_2
$\vdots$
x_N y_N

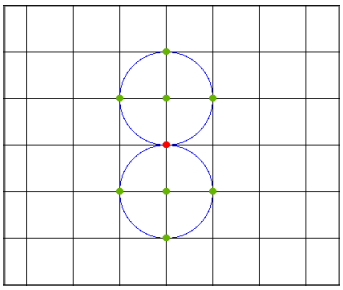
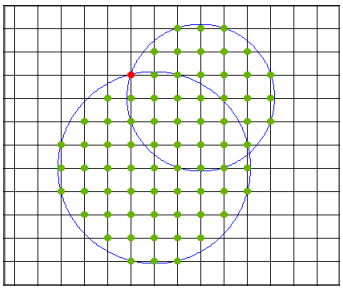
Constraints:

- $1 \leq N \leq 10^5$
- $-10^5 \leq x_i, y_i \leq 10^5$
- (x_i, y_i) are pairwise distinct.
- $(x_i, y_i) \neq (0, 0)$
- All values in the input are integers.

Output

Print the answer in a single line.

Examples

standard input	standard output	Notes
2 0 1 0 -1	9	
2 3 1 1 4	74	
4 3 4 4 3 -2 -2 -3 2	146