RGPC '17 P1 - Circle Clicking!

Time limit: 2.0s **Memory limit:** 64M

Kashif is a pretty big ~~weeb~~ Japanese animation enthusiast, so it's no surprise that he enjoys playing osu!, an anime-themed rhythm game. In this game, circles appear one-by-one on the screen, and players are required to move their cursor to them and click on them at just the right time to get points.

New circles usually appear close to the positions of previous circles, but they may occasionally appear on the other side of the screen as well (called "jumps"). **Kashif** can play well when the distance between two sequential circles is less than or equal to D, but if the distance is too great, he misses, and his combo (number of successful hits before the miss) resets to 0.

Given a sequence of coordinates of circles (points) in the form (x_i, y_i), **Kashif** wants to know what his greatest possible combo is, if he always hits the first point. For the purpose of this problem, assume that circles can only be hit at exactly the specified point.

Input Specification

The first line will contain 2 space-separated integers N $(1 \leq N \leq 100\,000)$ and D $(1 \leq D \leq 1\,000)$, representing the total number of circles in the sequence and **Kashif**'s greatest jump distance respectively.

The next N lines will each contain 2 space-separated integers, x_i and y_i $(-1\,000 \leq x_i, y_i \leq 1\,000)$, representing the coordinates of the i^{th} circle.

Output Specification

Output a single integer representing the longest possible combo **Kashif** can achieve.

Sample Input

```
5 5
0 0
1 1
2 1
2 -6
-1 -4
```

Sample Output

```
3
```