时间限制：C/C++/Rust/Pascal 2秒，其他语言4秒
空间限制：C/C++/Rust/Pascal 512 M，其他语言1024 M
Special Judge, 64bit IO Format: %lld

题目描述

A convex polygon lies lazily on the Euclidean xOy plane. What is it like to have a friend? It thinks to itself.

Tiny as it is, a point P appears at the position (x, y) and catches the attention of the polygon. They become friends, and the polygon loves rotating anti-clockwise around this little point P, as in that way, it can cover some area it never covered before. An area is covered by the polygon if every point in it is inside or on the edges of the polygon.

But P is worried: There can be one day when the polygon becomes bored with rotating. It thinks that when the area that has once been covered by the polygon doesn't become larger, the polygon will just ditch it and they will no longer be friends.

The angular velocity of the rotation of the polygon is 1 rad per year, and let the time when the polygon starts rotating be Time 0. Help P know the moment when his worries may come true.

It is **not guaranteed** that P is inside the polygon.

输入描述:

Each test contains multiple test cases. The first line contains the number of test cases T $(1 \leq T \leq 10^4)$.

Each test case consists of many lines.

The first line contains 3 integers n, x, y $(3 \leq n \leq 5 \times 10^5, |x| \leq 10^9, |y| \leq 10^9)$, where n is the number of edges of the convex polygon and (x, y) is the position of P.

Each line from the second to the $(n+1)$-th contains two integers x_i, y_i $(|x_i| \leq 10^9, |y_i| \leq 10^9)$, the position of one vertex in the polygon. It is guaranteed that the vertices given are in anti-clockwise order.

It is guaranteed that $\sum n$ over all test cases in one test will not exceed 5×10^5.

输出描述:

For each test case, output one value: the moment when P's worries may come true. If the real answer is ans, your answer ans' is considered correct if $\frac{|ans-ans'|}{\max(1,ans)} \leq 10^{-6}$.

示例1