

标签 叉积 下的文章

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「Codeforces 70D」Professor's Task
(<https://blog.orzsiyuan.com/archives/Codeforces-70D-Professor-Task/>)

题目链接: Codeforces 70D (<https://codeforces.com/contest/70/problem/D>)

你需要实现这样一个数据结构，维护一个点集 S 的凸包。一共有 q 种操作，操作分为如下 2 种：

1. 将一个坐标为 (x, y) 的点加入点集 S 。点集 S 的凸包可能会改变，也可能还是原来的样子。
2. 查询点 (x, y) 是否在凸包内部，包括边界。

保证前 3 个操作都是加入操作，且加入的 3 个点构成三角形。所有加入 S 的点的坐标都是不同的。

数据范围： $4 \leq q \leq 10^5$ ， $-10^6 \leq x, y \leq 10^6$ 。

👤 Siyuan (<https://blog.orzsiyuan.com/author/1/>) 🕒 2019 年 03 月 10 日



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📄 文章数目	187
💬 评论数目	243
📅 运行天数	1年25天
🔄 最后活动	4 个月前

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