标签 LIS 下的文章

⌈HDU 4742⌋ Pinball Game 3D (https://blog.orzsiyuan.com/archives/HDU-4742-Pinball-Game-3D/)

> 题目链接：HDU 4742 (http://acm.hdu.edu.cn/showproblem.php?pid=4742)

RD 很擅长弹珠游戏。最近他发现了一种 3D 弹珠游戏，一共有 n 个求，每个球可以看作一个点。一开始 RD 扔出一个球使它击中另一个球，被击中的球会移动并可能击中另一个球，如此循环下去。但是一旦一个球击中了另一个球，它就会消失。

RD 可以控制每个球的移动方向，但是有一个限制：如果球 A 的坐标为 (x_1, y_1, z_1)，球 B 的坐标为 (x_2, y_2, z_2)，那么球 A 能击中球 B 当且仅当 $x_1 \le x_2$，$y_1 \le y_2$，$z_1 \le z_2$。

现在，请你帮助 RD 求出可以击中的球的最大数量，以及可以击中这么多球的方案数，对 2^{30} 取模。两个方案中只要有一个球是不同的那么就认为他们不同。

本题有 T 组数据。

数据范围：$1 \le T \le 3$，$1 \le n \le 10^5$，$0 \le x_i, y_i, z_i \le 2^{30}$。

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