

The background is a soft-focus illustration of a classroom. On the left, a girl with long brown hair, wearing a white sailor-style school uniform with a red neckerchief, sits at a wooden desk with her chin resting on her hand, looking thoughtfully towards the right. On the right, a boy with short black hair, wearing a dark blue school uniform jacket, sits at another desk with his arms crossed, looking down with a slightly grumpy or tired expression. Behind them are wooden bookshelves filled with various books. The overall lighting is warm and gentle.

普转提day4 题解

仓鼠

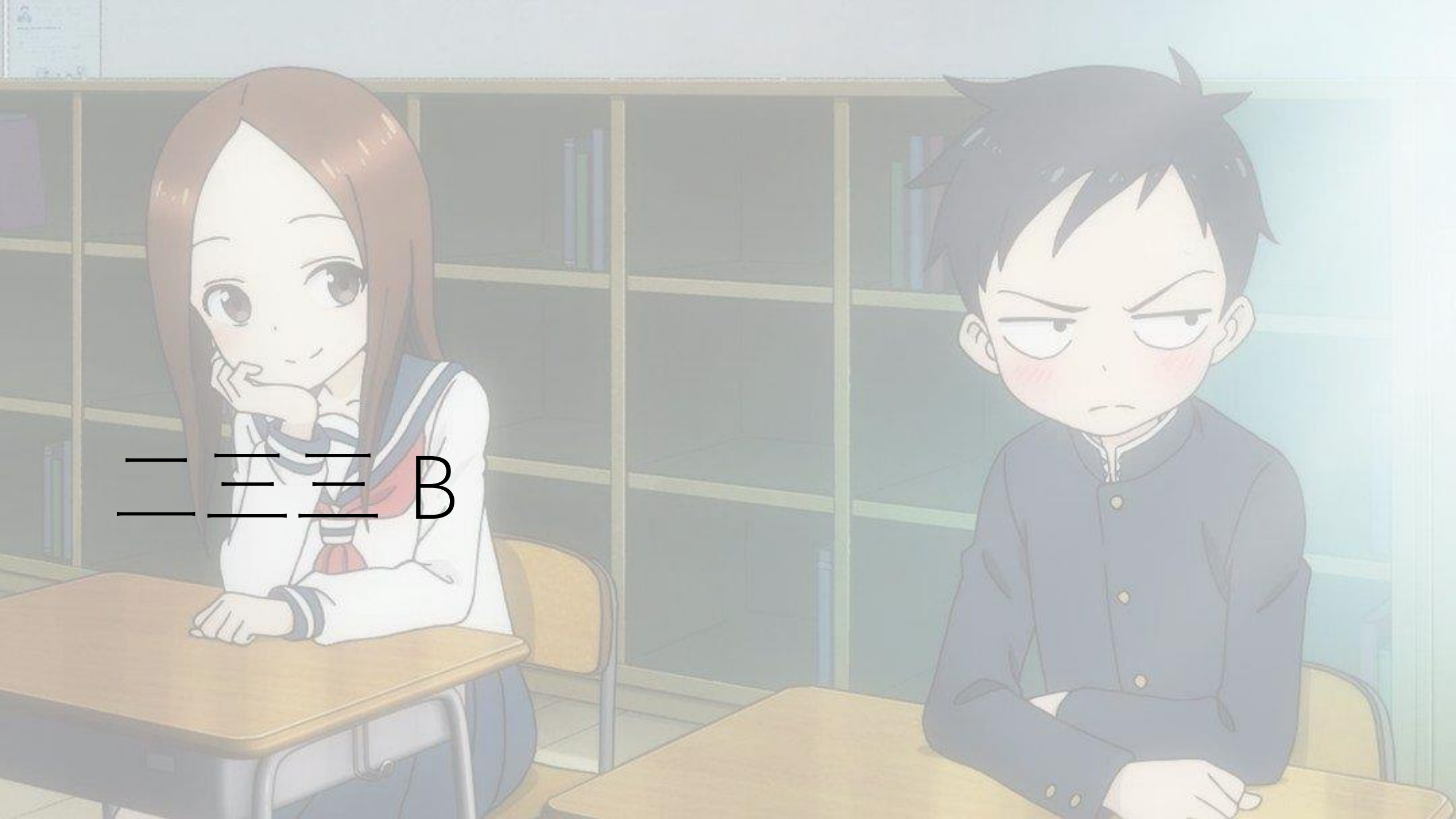
糖果 A



题解

- 经过了 $\left\lceil \frac{a}{c} \right\rceil$ 天后，小A的糖果被吃完
- 答案就是 $b + d \times \left\lceil \frac{a}{c} \right\rceil$
- $\left\lceil \frac{a}{c} \right\rceil = \left\lfloor \frac{a-1}{c} \right\rfloor + 1$
- 时间复杂度是 $O(1)$





二二三B

题解

- 前 m 段的字母总数为 $\frac{m(m+1)}{2}$
- 通过二分答案找到查询的字母在第几段，然后减去之前的字母总数就可以算出它在该段中的位置
- 时间复杂度 $O(n \log_2 k)$

配对 C



题解


- 既然只有两种串，那么就对于每个串分别算最小的交换代价
- 有解当且仅当字母个数分别相等
- 当 $t = 0$ 的时候，答案就是 $s[i] \neq t[i]$ 的个数除以2
- 注意到交换两个相同的字母永远不优，因此A和B在每个串中的相对顺序固定，因此可以计算出每个位置最后要放哪个字母
- 当 $t = 1$ 的时候，我们只需要去交换两个相邻的字母，因此答案就是交换的距离和
- 当 $t > 1$ 的时候，因为均值不等式，答案和 $t = 1$ 的时候答案一样
- 时间复杂度是 $O(n)$ 的

划分 D



题解

- 分情况讨论：是否在一个数组内
- 对于第一种情况在一个数组内，直接枚举区间的终点然后二分即可，或者双指针也可以
- 对于第二种情况不在一个数组内，这个区间的和可以表示成 $\text{pre}[i] + \text{sum} \times x + \text{suf}[j]$ 的形式。假设 $1 \leq i, j \leq n$ ，那么 $0 \leq x \leq m - 2$ ，这样的区间数目是 $(m - 1) - x$
- 枚举每个 j ，求出最大的 x ，再做一次二分求出对应的最大的 i ，就可以算出答案了
- 时间复杂度是 $O(n \log_2 m)$

An anime-style illustration of a classroom scene. On the left, a girl with long brown hair, wearing a white sailor-style school uniform with a red collar and blue skirt, sits at a wooden desk. She is resting her chin on her hand and looking towards the right. On the right, a boy with short black hair, wearing a dark blue school uniform jacket, sits at another desk. He has a grumpy expression with heavy-lidded eyes and red blush marks on his cheeks. The background features a bookshelf filled with books and a window with a light blue sky. The text "谢谢大家" is centered in the middle of the image.

谢谢大家