13237 Intersecting Semi-Circles

There are n points on X-axis, and their coordinates are $(1,0)$, $(2,0)$, $\ldots$, $(n,0)$. The color of the point is $(i,0)$ is a_i. If two points have the same color, then a semi-circle centered at their midpoint on the X-axis, connecting them, is drawn with color a_i in the first quadrant (this is thus the top half of the circle, with these two points on the diameter).

Compute the number of intersections where 2 arcs of different colors intersect *modulo* 1000000007.

Input

A number of of inputs (≤ 150), each starting with n on a line, followed by a line with n numbers a_i ($1 \leq n \leq 100000$, $1 \leq a_i \leq 100000$).

Output

For each input, output the answer on one line.

Sample Input

```
1
1
8
1 2 3 1 2 3 2 1
```

Sample Output

```
0
8
```