N people are waiting in line to enter a concert. People get bored waiting so they turn and look for someone familiar in the line.

Two persons A and B standing in line can see each other if they're standing right next to each other or if **no person between them is strictly taller** than person A **or** person B.

Write a program that determines the number of pairs of people that can see each other.

INPUT

The first line of input contains an integer N ($1 \leq N \leq 500\,000$), the number of people standing in line.

Each of the following N lines contains a single integer, the height of one person in nanometres. Everyone will be shorter than 2^{31} nanometres.

The heights are given in the order in which people are standing in line.

OUTPUT

Output the number of pairs of people that can see each other on a single line.

SAMPLE TEST DATA

input

```
7
2
4
1
2
2
5
1
```

output

```
10
```