

Contest Duration: 2025-12-13(Sat) 23:00 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20251213T2100&p1=248>) - 2025-12-14(Sun) 00:40 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20251213T2240&p1=248>) (local time) (100 minutes)

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F - Starry Landscape Photo

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Time Limit: 2 sec / Memory Limit: 1024 MiB

Score : 500 points

Problem Statement

In the night sky seen from planet AtCoder, there are N stars, and these N stars are arranged in a line from east to west. The i -th star from the east ($1 \leq i \leq N$) is the B_i -th brightest among these stars.

Takahashi decided to take a picture of the night sky using the following procedure:

1. Choose a pair of integers (l, r) satisfying $1 \leq l \leq r \leq N$, and set up the camera so that the l -th, $(l + 1)$ -th, \dots , r -th stars from the east all fit in the frame, and no other stars enter the frame.
2. Choose an integer b satisfying $1 \leq b \leq N$, and open the shutter so that all stars among the N stars whose brightness ranks from 1st through b -th (and that fit in the frame) are captured, and no other stars are captured.

However, he may not take a picture with no stars captured.

Find the number of different sets of stars that can be captured in pictures taken in this way.

Constraints

- $1 \leq N \leq 5 \times 10^5$

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- $1 \leq B_i \leq N$ ($1 \leq i \leq N$)
 - $B_i \neq B_j$ ($1 \leq i < j \leq N$)
 - All input values are integers.
-

Input

The input is given from Standard Input in the following format:

```
N  
B1 B2 ... BN
```

Output

Print the answer.

Sample Input 1

Copy

```
4  
3 1 4 2
```

Copy

Sample Output 1

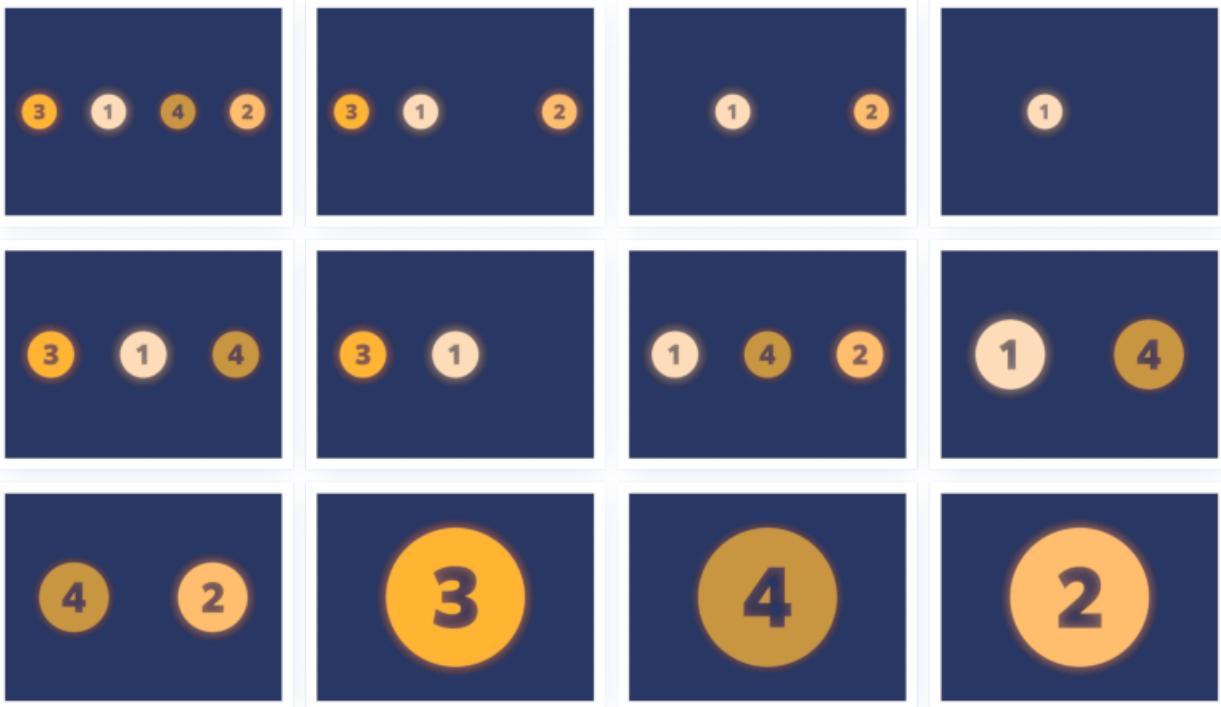
Copy

```
12
```

Copy

For example, with $(l, r) = (2, 4)$, $b = 3$, you can take a picture with two stars: the 2nd star from the east and the 4th star from the east.

Including this, you can take pictures with the following 12 different sets of stars. In each picture, stars further east are arranged further left, and the i -th brightest star is labeled with integer i .



No other sets can be captured, so print 12.

Sample Input 2

[Copy](#)

```
7  
1 2 3 4 5 6 7
```

[Copy](#)

Sample Output 2

[Copy](#)

```
28
```

[Copy](#)

Sample Input 3

[Copy](#)

```
20  
15 5 13 17 9 11 20 4 14 16 6 3 8 19 12 7 10 18 2 1
```

[Copy](#)

Sample Output 3

[Copy](#)

```
627
```

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to)

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