Contest Duration: 2019-03-23(Sat) 21:00 (http://www.timeanddate.com/worldclock/fixedtime.html?iso=20190323T2200&p1=248) ~ 2019-03-23(Sat) 22:50 (http://www.timeanddate.com/worldclock/fixedtime.html?iso=20190323T2350&p1=248) (local time) (110 minutes)

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D - Rotation Sort

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Time Limit: 2 sec / Memory Limit: 1024 MB

Score : 1000 points

Problem Statement

You are given a permutation $p = (p_1, \ldots, p_N)$ of $\{1, \ldots, N\}$. You can perform the following two kinds of operations repeatedly in any order:

- Pay a cost A. Choose integers l and r ($1 \leq l < r \leq N$), and shift $(p_l, \ldots, p_r)$ to the left by one. That is, replace $p_l, p_{l+1}, \ldots, p_{r-1}, p_r$ with $p_{l+1}, p_{l+2}, \ldots, p_r, p_l$, respectively.
- Pay a cost B. Choose integers l and r ($1 \leq l < r \leq N$), and shift $(p_l, \ldots, p_r)$ to the right by one. That is, replace $p_l, p_{l+1}, \ldots, p_{r-1}, p_r$ with $p_r, p_l, \ldots, p_{r-2}, p_{r-1}$, respectively.

Find the minimum total cost required to sort p in ascending order.

Constraints

- All values in input are integers.
- $1 \leq N \leq 5000$
- $1 \leq A, B \leq 10^9$
- $(p_1 \ldots, p_N)$ is a permutation of $\{1, \ldots, N\}$.

Input

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Input is given from Standard Input in the following format:

$$N \quad A \quad B$$
$$p_1 \quad \cdots \quad p_N$$

Output

Print the minimum total cost required to sort p in ascending order.

Sample Input 1 Copy

```
3 20 30
3 1 2
```

Copy

Sample Output 1 Copy

```
20
```

Copy

Shifting (p_1, p_2, p_3) to the left by one results in $p = (1, 2, 3)$.

Sample Input 2 Copy

```
4 20 30
4 2 3 1
```

Copy

Sample Output 2 Copy

```
50
```

Copy

One possible sequence of operations is as follows:

- Shift (p_1, p_2, p_3, p_4) to the left by one. Now we have $p = (2, 3, 1, 4)$.
- Shift (p_1, p_2, p_3) to the right by one. Now we have $p = (1, 2, 3, 4)$.

Here, the total cost is $20 + 30 = 50$.

Sample Input 3 Copy

```
1 10 10
1
```

Copy

Sample Output 3 Copy

```
0
```

Sample Input 4 Copy

```
4 1000000000 1000000000
4 3 2 1
```

Sample Output 4 Copy

```
3000000000
```

Sample Input 5 Copy

```
9 40 50
5 3 4 7 6 1 2 9 8
```

Sample Output 5 Copy

```
220
```

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