Contest Duration: 2025-04-27(Sun) 08:00 (http://www.timeanddate.com/worldclock/fixedtime.html?
iso=20250427T2100&p1=248) - 2025-04-27(Sun) 09:40 (http://www.timeanddate.com/worldclock/fixedtime.html?
iso=20250427T2240&p1=248) (local time) (100 minutes)   Back to Home (/home)

D - Forbidden Difference

🇯🇵 / 🇬🇧

Time Limit: 2 sec / Memory Limit: 1024 MB

Score : 425 points

Problem Statement

You are given a length-N integer sequence $A = (A_1, A_2, \ldots, A_N)$ and a non-negative
integer D. We wish to delete as few elements as possible from A to obtain a sequence B
that satisfies the following condition:

- $|B_i - B_j| \neq D$ for all $i, j \ (1 \le i < j \le |B|)$.

Find the minimum number of deletions required.

Constraints

- $1 \le N \le 2 \times 10^5$
- $0 \le D \le 10^6$
- $0 \le A_i \le 10^6$
- All input values are integers.

Input

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

```
N  D
A_1  A_2  ...  A_N
```

Output

Print the answer.

Sample Input 1   Copy

```
5 2
3 1 4 1 5
```

Sample Output 1   Copy

```
1
```

Deleting $A_1 = 3$ yields $B = (1, 4, 1, 5)$, which satisfies $|B_i - B_j| \neq 2$ for all $i < j$.

Sample Input 2   Copy

```
4 3
1 6 1 8
```

Sample Output 2   Copy

```
0
```

The sequence A may already satisfy the condition.

Sample Input 3   Copy

```
10 3
1 6 2 10 2 3 2 10 6 4
```

Sample Output 3   Copy

> 2   Copy

Language

Python (CPython 3.11.4)   ▼

Source Code

📁 Open File   ⚙ Customize   Toggle Editor   Auto Height

1 |

* at most 512 KiB

* Your source code will be saved as Main.*extension*.

CLOUDFLARE
Privacy • Terms

Submit

#telegram)

url=https%3A%2F%2Fatcoder.jp%2Fcontests%2Fabc403%2Ftasks%2Fabc403_d%3Flang%3Den&title=D%20-

2025-04-27 (Sun)
16:58:58 -04:00

Rule (/contests/abc403/rules)   Glossary (/contests/abc403/glossary)

2025-04-27 (Sun)
16:58:58 -04:00