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## D - Forbidden Difference

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Time Limit: 2 sec / Memory Limit: 1024 MB

Score : 425 points

### Problem Statement

You are given a length- $N$  integer sequence  $A = (A_1, A_2, \dots, A_N)$  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  $i, j$  ( $1 \leq i < j \leq |B|$ ).

Find the minimum number of deletions required.

### Constraints

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

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## Input

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

```
 $N$   $D$   
 $A_1$   $A_2$   $\dots$   $A_N$ 
```

## Output

Print the answer.

### Sample Input 1

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

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### Sample Output 1

[Copy](#)

```
1
```

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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
```

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### Sample Output 2

[Copy](#)

```
0
```

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The sequence  $A$  may already satisfy the condition.

### Sample Input 3

[Copy](#)

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

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## Sample Output 3

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2

Copy

### Language

Python (CPython 3.11.4) ▼

### Source Code

Open FileCustomizeToggle EditorAuto Height

1 |

\* at most 512 KiB

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

Submit

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