

Contest Duration: 2025-04-27(Sun) 22:00 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20250427T2100&p1=248>) - 2025-04-27(Sun) 23:40 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20250427T2240&p1=248>) (local time) (100 minutes)

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## D - Forbidden Difference

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Time Limit: 2 sec / Memory Limit: 1024 MiB

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.

### Input

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

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

## Output

Print the answer.

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### Sample Input 1

Copy

5	2			
3	1	4	1	5

Copy

### Sample Output 1

Copy

1
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Copy

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

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### Sample Input 2

Copy

4	3		
1	6	1	8

Copy

### Sample Output 2

Copy

0
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Copy

The sequence  $A$  may already satisfy the condition.

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### Sample Input 3

Copy

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

Copy

### Sample Output 3

Copy

2
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