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## Close equal numbers

P63257\_en

Vint-i-unè Concurs de Programació de la UPC - Final (2023-09-27)

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Given an integer number  $k$  and  $n$  numbers  $x_1, \dots, x_n$ , are there at least two equal numbers at distance at most  $k$ ? Consider the sequence of  $x_i$ 's circularly, that is, assume that  $x_1$  is to the right of  $x_n$ .

### Input

Input consists of several cases, each with  $k$  and  $n$ , followed by  $x_1, \dots, x_n$ . You can assume  $1 \leq k \leq n/2$ ,  $2 \leq n \leq 10^5$ , and that each  $x_i$  is an integer number between 0 and  $10^9$ .

### Output

For every case, print "yes" if there is at least a pair of  $x_i$ 's with the required condition, and print "no" otherwise.

### Sample input

```
4 8 10 42 23 33 12 42 17 18
3 8 10 42 23 33 12 42 17 18
4 7 10 42 23 33 12 42 17
3 7 10 42 23 33 12 42 17
```

### Sample output

```
yes
no
yes
yes
```

### Problem information

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Generation : 2024-05-02 20:56:40

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