



# Reach the Target

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■ Memory limit: 512M

✓ Allowed languages

Given a set of starting values, the task is to determine whether it is possible to transform any one of these values into a target number using a specific set of operations.

Note: You are given:

- An integer (N), the number of starting values.
- An integer M (the target),
- An integer (X), which represents the additive operation (| + X |),
- An integer (Y), which represents the multiplicative operation ((\* Y))
- An array of (N) integers, which represent the starting values.

For each starting value, you may perform these operations any number of times (in any order). Output Yes if there exists at least one starting value that can be transformed to exactly M; otherwise, output No. It is assumed that the operations are such that they always move the current value toward the target based on the context (i.e., if a starting value is less than M, both operations should help in increasing the value; if it is greater than M, both operations should help in decreasing the value).

### **Input Format**

- The first line contains four space-separated integers: N, M, X, and Y.
- The second line contains N space-separated integers, representing the starting values.

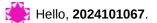
## **Output Format**

• Print Yes (case-sensitive) if it is possible to reach M from any starting value using the given operations; otherwise, print No.

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- $2 \le Y \le 10^3$
- $1 \le N * M \le 10^6$

## Sample Input 1

3 50 5 2 10 20 30

### **Sample Output 1**



#### **Explanation:**

For at least one starting value (e.g., 10), it is possible through a sequence of operations (+5 and \*2) to reach the target 50.

## Sample Input 2

4 100 10 3 5 15 25 35

# **Sample Output 2**

No

#### **Explanation:**

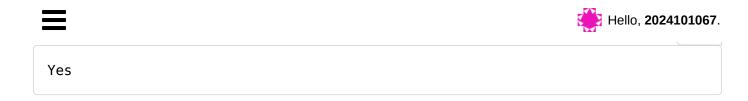
None of the starting values can be transformed to reach the target  $\boxed{100}$  using the operations  $\boxed{+10}$  and  $\boxed{*}$   $\boxed{3}$ .

# Sample Input 3

2 7 2 3 8 1

# **Sample Output 3**

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#### **Explanation:**

For at least one starting value (e.g., 1), it is possible through a sequence of operations (+2, +2) and +2) to reach the target 7.

# Clarifications

Request clarification

No clarifications have been made at this time.

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