

## Problem A. Jumble Jack

Input file:            **standard input**  
Output file:          **standard output**  
Time limit:           **1 second**  
Memory limit:        **256 megabytes**

Jack has two strings  $s$  and  $t$ .

Tell whether jack can form  $t$  from  $s$  by using a certain character of  $s$  as many times as he wants but the only constraint he has is that he can't pick any vowel from  $s$ .

Vowels belongs to the set 'a', 'e', 'i', 'o', 'u'

### Input

The first line of input contains the string  $s$ .

The second line of input contains the string  $t$ .

$$1 \leq \text{len}(s) \leq 10^3$$

$$1 \leq \text{len}(t) \leq 10^3$$

### Output

The single line of output contains "Yes" or "No" (without quotes) stating whether the above mentioned formation is possible or not.

### Examples

standard input	standard output
a aaaa	No
abc bcbc	Yes

## Problem B. K-Fantasy

Input file:            **standard input**  
Output file:         **standard output**  
Time limit:          1 second  
Memory limit:       256 megabytes

Given an array  $A$  of  $n$  integers and an integer  $x$ . Find if there exists a subsequence  $B = b_1 b_2 \dots b_k$  of the array  $A$  of length  $k (k \geq 2)$  such that

$$(b_1 + b_2 + \dots + b_{k-1}) * b_k = x$$

A subsequence is a sequence which can be obtained by removing some (possibly none) elements from the original sequence. For example,  $[3, 3]$  is a subsequence of  $[4, 3, 1, 3]$  but  $[1, 4]$  is not.

### Input

First line contains 3 integers  $n, k, x$  ( $2 \leq k \leq n \leq 20$ ) and  $(-10^{15} \leq x \leq 10^{15})$ .

Second line contains  $n$  integers  $a_1, a_2, \dots, a_n$  ( $-10^9 \leq a_i \leq 10^9$ ).

### Output

Print "Yes" (without quotes) if such a subsequence exists in the array, else print "No".

### Examples

standard input	standard output
6 3 8 5 3 2 17 8 1	Yes
6 4 8 5 4 -2 17 8 -8	No

### Note

In the first sample test case, we can take  $b_1 = 5$ ,  $b_2 = 3$  and  $b_3 = 1$ . Hence  $(5+3)*1 = 8$

In the second sample test, no such subsequence exists.

## Problem C. Hardik and Lawrence Love Chocolates

Input file:            standard input  
Output file:          standard output  
Time limit:           1 second  
Memory limit:        512 megabytes

Hardik and Lawrence are very fond of chocolates. Hence, they have gone to a chocolate factory and have given an order of  $k$  chocolates. The factory has  $n$  machines and each machine takes  $A_i$  certain number of seconds to make a chocolate. They are getting very eager to eat the chocolates, and they want to know the minimum time to make  $k$  chocolates.

NOTE: All machines can work together simultaneously and you can freely decide the schedule.

**Don't use any in built functions.**

### Input

The first line has one integer  $n$  and next line has the other integer  $k$ , i.e, denoting the number of machines and chocolates.

The next line has  $n$  integers  $A_1, \dots, A_n$  where  $A_i$  denotes the time needed to make a chocolate using each machine.

- $1 \leq n \leq 2 * 10^5$
- $1 \leq k \leq 10^9$
- $1 \leq A_i \leq 10^9$ .

### Output

Output the minimum time to make  $k$  chocolates.

### Examples

standard input	standard output
1 4 3	12
3 3 3 1 1	2
2 2 3 5	5