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# Find GCD of all the elements and Maximum number in that.

🔒 locked

Problem

Submissions

Leaderboard

Discussions

K value is given. Find GCD of all the elements in the array with K value. There will be N numbers of GCD values in which find the maximum GCD.

For Example: k=4, Array=[2,4,7,10,15,16];

Step 1: GCD(4,2) -> 2

Step 2: GCD(4,4) -> 4

Step 3: GCD(4,7) -> 1

Step 4: GCD(4,10) -> 2

Step 5: GCD(4,15) -> 1

Step 6: GCD(4,16) -> 4

GCD values are 2,4,1,2,1,4. Now, Maximum GCD(Output) is: 4

**Note:** Don't create another array. If you create another array, it will reduce your mark while evaluating.

## Input Format

N,k,array[i]-> Integer

## Constraints

$1 \leq N \leq 1000$

$1 \leq \text{arr}[i] \leq 10000$

$1 \leq k \leq 10000$

## Output Format

print the maximum element.

## Sample Input 0

```
6
2 4 7 10 15 16
4
```

## Sample Output 0

```
4
```

## Sample Input 1

```
10
12 15 56 7 5 18 31 27 10 3
5
```

## Sample Output 1

```
5
```

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Submissions: 60

Max Score: 100

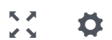
Difficulty: Medium

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C



```
1 #include <stdio.h>
2 #include <string.h>
3 #include <math.h>
4 #include <stdlib.h>
5
6 int gcd(int a, int b)
7 {
8     if (b == 0)
9         return a;
10    else
11        return gcd(b, a % b);
12 }
13
14 int main() {
15
16    /* Enter your code here. Read input from STDIN. Print output to STDOUT */
17    int n,temp,max=0,k,i;
18    scanf("%d",&n);
19    int arr[n];
20    for(i=0;i<n;i++)
21    {
22        scanf("%d",&arr[i]);
23    }
24    scanf("%d",&k);
25
26    for(i=0;i<n-1;i++)
27    {
28        temp=gcd(k,arr[i]);
29        if(temp > max)
30            max=temp;
31    }
32    printf("%d",max);
33
34
35    return 0;
36 }
37
```

Line: 1 Col: 1

[Upload Code as File](#) ☐ Test against custom input

Run Code

Submit Code