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<=N<=1000

1<=arr[i]<=10000

1<=k<=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
```

Submissions: 60
Max Score: 100
Difficulty: Medium

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C

```c
#include <stdio.h>
#include <string.h>
#include <math.h>
#include <stdlib.h>

int gcd(int a, int b)
{
    if (b == 0)
        return a;
    else
        return gcd(b, a % b);
}

int main() {

    /* Enter your code here. Read input from STDIN. Print output to STDOUT */
    int n,temp,max=0,k,i;
    scanf("%d",&n);
    int arr[n];
    for(i=0;i<n;i++)
    {
        scanf("%d",&arr[i]);
    }
    scanf("%d",&k);

    for(i=0;i<n-1;i++)
    {
        temp=gcd(k,arr[i]);
        if(temp > max)
            max=temp;
    }
    printf("%d",max);


    return 0;
}

```

Line: 1 Col: 1

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