STUDENT REPORT

DETAILS

Name

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Roll Number

KUB23CSE101

EXPERIMENT

Title

SUM OF NUMBERS AT PRIME FACTORS

Description

Prime factors of a positive integer are the prime numbers that divide that integer exactly.

Given an array arr of n integers and a positive integer num.

Let's suppose prime factorization of num is: $p^a \times q^b \times r^c \times \dots \times z^f$,where p,q,r...z are prime numbers.

Sum of numbers in array arr at indices of prime factors of number num is: a x arr[p] + b x arr[q] + c x arr[r] +...... + f x arr[z].

You are given an array arr of size n and a positive integer num. You are required to calculate the sum of numbers in arr as mentioned above, and print the same.

Note:

- If arr is empty, print **-1**.
- If prime factor of num not found as indices, print 0.

Input Format:

The input consists of three lines:

- The first line contains an integer, i.e. n.
- The second line contains an array arr of length of n.
- The third line contains an integer num

The input will be read from the STDIN by the candidates.

Output Format:

Print the sum that was mentioned in the problem statement.

Example:

Input:

6

11 21 32 45 1 23

6

Output:

77

Explanation:

$6 = 2^1 \times 3^1$

sum=1*arr[2]+1*arr[3]=1*32+1*45=77

Source Code:

```
def solve(arr,num):
    primes=[]
    for i in range(2,(num//2)+1):
        while num%i==0:
            primes.append(i)
            num=num//i
    if num>2:
        primes.append(num)
    ans=0
    for i in primes:
        try:
            ans+=arr[i]
        except:
            return 0
    return ans
n=int(input())
if n !=0:

    arr=list(map(int,input().split()))
    num=int(input())
    print(slove(arr,num))
else:
    print(-1)
```

RESULT

1 / 5 Test Cases Passed | 20 %