. ~	Logo	
MBSS	1017 12 12 12 12 12 12 12 12 12 12 12 12 12	0,5
,	STUDENT REPORT SELECTIVE STUDENT REPORT	23054
12	2325E017 241823CS 5E017 411 1823CSE01 1241823 05E017 411823CSE0	20
25 DE	TAILS LUBY SEED TO	<u> </u>
V .	Name 185355 15 17 1785 3 25 10 1 17873 2 10 17 17 17873 2 17 17873	4012
· 67	M G BASAVANAGOWDA	2
015 E	Roll Number	
Š	KUB23CSE072	MBZS
SEO	or sold the control of the control o	
EX Titl	PERIMENT le CEO LUBRISCE DI L	12
Titl	(a) C2 E10	3056
43	UM OF NUMBERS AT PRIME FACTORS	82
CSEO12 L	Description	.18
, .	Description	312 KUB
23		
12 KUB231	Given an array arr of n integers and a positive integer num.	65
\	Let's suppose prime factorization of num is: $p^a x q^b x r^c x \dots x z^f$, where p,q,rz are prime numbers.	5823°
EO	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 $[z]$.	
1823C3	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.	5£012 ×
		5
36012 KJ	If arr is empty, print -1.	
SEO	 If prime factor of num not found as indices, print 0. 	MBS
, c	Input Format:	2
*11853C	The input consists of three lines:	(
+	• The first line contains an integer, i.e. n.	30550
.7.	 The second line contains an array arr of length of n. The third line contains an integer num 	50
3C5E017	The input will be read from the STDIN by the candidates.	
V	Output Format:	5012
LUB)	Print the sum that was mentioned in the problem statement.	,
+	Example:	330
	Input:	FIB
	6	
	11 21 32 45 1 23	15013
	6	ight in the second
	Output:	(
	77	1823B
		43

Explanation:

```
6=2^{1} \times 3^{1}
sum=1*arr[2]+1*arr[3]=1*32+1*45=77
```

Source Code:

```
from collections import defaultdict
def prime_factors(num):
    factors = defaultdict(int)
    while num % 2 == 0:
       factors[2] += 1
        num //= 2
    for i in range(3, int(num**0.5) + 1, 2):
       while num % i == 0:
            factors[i] += 1
            num //= i
    if num > 2:
       factors[num] += 1
    return factors
def calculate_prime_index_sum(arr, num):
    if not arr:
       return -1
    factors = prime_factors(num)
    total_sum = 0
    valid_prime_found = False
    for prime, power in factors.items():
       if prime < len(arr):</pre>
            total_sum += power * arr[prime]
            valid_prime_found = True
    return total_sum if valid_prime_found else 0
if __name__ == "__main__":
    n = int(input())
    arr = list(map(int, input().split()))
    num = int(input())
    result = calculate_prime_index_sum(arr, num)
    print(result)
```

RESULT

4 / 5 Test Cases Passed | 80 %

٠٥.

NB23

.012

3050

TIB.

CEO,

8230

40,230