

SWETHA VEERAMANI 2024-AIML ▾**S2****Started on** Tuesday, 26 August 2025, 1:45 PM**State** Finished**Completed on** Tuesday, 26 August 2025, 1:48 PM**Time taken** 3 mins 49 secs**Marks** 1.00/1.00**Grade** 10.00 out of 10.00 (100%)

**Question 1** | Correct Mark 1.00 out of 1.00

Convert the following algorithm into a program and find its time complexity using counter method.

```
Factor(num) {
{
    for (i = 1; i <= num; ++i)
    {
        if (num % i == 0)
        {
            printf("%d ", i);
        }
    }
}
```

**Note:** No need of counter increment for declarations and scanf() and counter variable printf() statement.

**Input:**

A positive Integer n

**Output:**

Print the value of the counter variable

**Answer:**

```
1 #include<stdio.h>
2 void Factor(int num){
3     int counter=0;
4     int factorCount=0;
5     for(int i=1;i<=num;++i){
6         counter++;
7         counter++;
8
9         counter++;
10        counter++;
11        if(num%i==0){
12            factorCount++;
13        }
14    }
15    counter=(2*num)+factorCount+1;
16    printf("%d\n",counter);
17 }
18 int main(){
19     int n;
20     scanf("%d",&n);
21     Factor(n);
22     return 0 ;
23 }
```

	Input	Expected	Got	
✓	12	31	31	✓
✓	25	54	54	✓
✓	4	12	12	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

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