Problem 3: Finding Complexity using Counter Method

Started on	Wednesday, 27 August 2025, 8:16 PM
State	Finished
Completed on	Wednesday, 27 August 2025, 8:24 PM
Time taken	7 mins 28 secs
Marks	1.00/1.00
Grade	**10.00** out of 10.00 (**100**%)

Question 1 | Correct   Mark 1.00 out of 1.00   ⚑ Flag question

```
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
3  int main()
4  {
5      int n,i,counter=0;
6      scanf("%d",&n);
7
8      for(i=1;i<=n;i++){
9          counter++;
10         counter++;
11         if(n%i==0){
12             counter++;
13         }
14     }
15     counter++;
16
17     printf("%d",counter);
18 }
```

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

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Finish review

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