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CS23331-DAA-2024-CSE / Problem 4: Finding Complexity using Counter Method

☑ Problem 4: Finding Complexity using Counter Method

Started on	Wednesday, 27 August 2025, 8:30 PM
State	Finished
Completed on	Wednesday, 27 August 2025, 8:46 PM
Time taken	16 mins 21 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.

void function(int n)
{
    int c= 0;
    for(int i=n/2; i<n; i++)
        for(int j=1; j<n; j = 2 * j)
            for(int k=1; k<n; k = k * 2)
                c++;
}

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

Input:
 A positive Integer n
Output:
Print the value of the counter variable
```

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Answer:

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

	Input	Expected	Got	
✔	4	30	30	✔
✔	10	212	212	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

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