Started on	Thursday, 8 August 2024, 11:31 AM
State	Finished
Completed on	Thursday, 8 August 2024, 11:35 AM
Time taken	4 mins 5 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.

```
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

Answer:

```
1   #include <stdio.h>
2
3   void function(int n)
4   {
5       int count=0;
6       int c= 0;
7       count++;                        //assignment
8       for(int i=n/2; i<n; i++){
9           count++;                        //for1 loop condition true
10          for(int j=1; j<n; j = 2 * j){
11              count++;                        //for2 loop condition true
12              for(int k=1; k<n; k = k * 2){
13                  count++;                        //for3 loop condition true
14                  c++;
15                  count++;                        //increment
16              }
17              count++;                        //for3 loop condition false
18          }
19          count++;                        //for2 loop condition false
20      }
21      count++;                        //for1 loop condition false
22      printf("%d",count);
23  }
24
25  int main(){
26      int n;
27      scanf("%d",&n);
28      function(n);
29  }
```

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

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

◄ Problem 3: Finding Complexity using Counter Method

Jump to...

Problem 5: Finding Complexity using counter method ►

◄ Problem 3: Finding Complexity using Counter Method

Jump to...

Problem 5: Finding Complexity using counter method ►