

Started on	Friday, 9 August 2024, 2:18 PM
State	Finished
Completed on	Friday, 9 August 2024, 2:26 PM
Time taken	7 mins 55 secs
Marks	1.00/1.00
Grade	10.00 out of 10.00 (100%)

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  void function(int n)
3  {
4      int c= 0;
5      c++;
6      for(int i=n/2; i<n; i++)
7      {
8          c++;
9          for(int j=1; j<n; j = 2 * j)
10         {
11             c++;
12             for(int k=1; k<n; k = k * 2)
13             {
14                 c++;
15                 c++;
16             }
17             c++;
18         }
19         c++;
20     }
21     c++;
22     printf("%d",c);
23 }
24 int main(){
25     int n;
26     scanf("%d",&n);
27     function(n);
28 }
```

	Input	Expected	Got	
✓	4	30	30	✓
✓	10	212	212	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.