

Started on Thursday, 31 July 2025, 9:17 AM

State Finished

Completed on Thursday, 31 July 2025, 9:24 AM

Time taken 6 mins 22 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:

[Reset answer](#)

```
1 #include<stdio.h>
2 void function(int);
3 void function(int n)
4 {
5     int count=0;
6     int c=0;
7     count++;
8     for(int i=n/2;i<n;i++)
9     {
10         count++;
11         for(int j=1;j<n;j=2*j)
12         {
13             count++;
14             for(int k=1;k<n;k=k*2)
15             {
16                 count++;
17                 c++;
18                 count++;
19             }
20             count++;
21         }
22         count++;
23     }
24     count++;
25     printf("%d",count);
26 }
27 int main()
28 {
29     int n;
30     scanf("%d",&n);
31     function(n);
32 }
```

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

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.