

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

	Input	Expected	Got	
✓	4	30	30	✓

	Input	Expected	Got	
✓	10	212	212	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

◀ Problem 3: Finding Complexity using Counter Method

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Problem 5: Finding Complexity using counter method ▶