



J2

Started on Friday, 26 September 2025, 1:35 PM

State Finished

Completed on Friday, 26 September 2025, 1:41 PM

Time taken 5 mins 42 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 int main(){
3     int n;
4     scanf("%d",&n);
5     int c=0;
6     int counter=0;
7     c++;
8     for(int i=n/2;i<n;i++){
9         c++;
10        for(int j=1;j<n;j=2*j){
11            c++;
12            for(int k=1;k<n;k=k*2){
13                c++;
14                c++;
15                counter++;
16            }
17            c++;
18        }c++;
19    }c++;
20    printf("%d",c);
21 }
```

	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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