

SWETHA VEERAMANI 2024-AIML ▾**S2****Started on** Tuesday, 26 August 2025, 1:50 PM**State** Finished**Completed on** Tuesday, 26 August 2025, 1:56 PM**Time taken** 5 mins 56 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 void function(int n){
3     int c=0;
4     c++;
5     for(int i=n/2;i<n;i++){c++;
6         for(int j =1;j<n;j=2*j){c++;
7             for(int k=1;k<n;k=k*2){
8                 c++;
9                 c++;
10                }c++;
11            }c++;
12        }c++;
13        printf("%d",c);
14    }
15 int main(){
16     int n;
17     scanf("%d",&n);
18     function(n);
19 }
20
```

	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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