



THIVYASRI T 2024-CSE

T2

Started on Monday, 18 August 2025, 8:16 AM**State** Finished**Completed on** Monday, 18 August 2025, 8:16 AM**Time taken** 21 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 {
4     int c = 2;
5     for(int i=n/2; i<n; i++){
6         c=c+2;
7         for(int j=1; j<n; j = 2 * j){
8             c=c+2;
9             for(int k=1; k<n; k = k * 2){
10                 c=c+2;
11             }
12         }
13     }
14     printf("%d",c);
15 }
16 int main(){
17     int a;
18     scanf("%d",&a);
19     function(a);
20     return 0;
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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