



JAYARAMAN S 2024-CSE ▾

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.

[Back to Course](#)