



MONIKA R 2024-CSE ▾

M2

Started on Tuesday, 26 August 2025, 8:35 AM

State Finished

Completed on Tuesday, 26 August 2025, 8:40 AM

Time taken 5 mins 1 sec

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      c++;
7      for(int i=n/2;i<n;i++){
8          c++;
9          for(int j=1;j<n;j=2*j){
10             c++;
11             for(int k=1;k<n;k=k*2){
12                 c++;
13                 c++;
14             }
15             c++;
16         }
17         c++;
18     }
19     c++;
20     printf("%d",c);
21     return 0;
22 }
```

	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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