Dashboard My courses

Problem 4: Finding Complexity using Counter Method

Started on	Wednesday, 20 August 2025, 8:35 AM
State	Finished
Completed on	Wednesday, 20 August 2025, 8:40 AM
Time taken	4 mins 49 secs
Marks	1.00/1.00
Grade	**10.00** out of 10.00 (**100**%)

Question 1 Correct Mark 1.00 out of 1.00 ⚑ Flag question

```
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:

```c
#include<stdio.h>
int function(int n)
{
    int c= 0;
    c++;
    c++;
    for(int i=n/2; i<n; i++){
        c++;
        c++;
        for(int j=1; j<n; j = 2 * j){
            c++;
            c++;
            for(int k=1; k<n; k = k * 2){
                c++;
                c++;
            }
        }
    }
    return c;
}
int main(){
    int n;
    scanf("%d",&n);
    int b = function(n);
    printf("%d",b);
    return 0;
}
```

	Input	Expected	Got	
✔	4	30	30	✔
✔	10	212	212	✔

Passed all tests! ✔

Back to Course