Problem 1: Finding Complexity using Counter Method

Started on Friday, 8 August 2025, 5:58 PM

State Finished

Completed on Sunday, 10 August 2025, 3:35 PM

Time taken 1 day 21 hours

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 the counter method.

```
void function (int n)
{
    int i= 1;

    int s =1;

    while(s <= n)
    {
        i++;
        s += i;
     }
}
```

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

For example:

Input	Result
9	12

Answer: (penalty regime: 0 %)

```
#include<stdio.h>
void function(int n){
    int i=1;
    int s=1;
    int c1=1,c2=1,c3=1;
    while(s<=n){
        i++;
        s+=i;
        c1++;
        c2++;
        c3++;
    }
    int c=c1+c2+c3;
    printf("%d\n",c);
}
int main()
{
    int n;
    scanf("%d",&n);
    function(n);
    return 0;
}
```

	Input	Expected	Got	
✔	9	12	12	✔
✔	4	9	9	✔

Passed all tests! ✔

Correct

Problem 2: Finding Complexity using Counter method

Started on Friday, 8 August 2025, 6:07 PM

State Finished

Completed on Sunday, 10 August 2025, 3:36 PM

Time taken 1 day 21 hours

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 the counter method.

```
void func(int n)
{
    if(n==1)
    {
      printf("*");
    }
    else
    {
     for(int i=1; i<=n; i++)
     {
       for(int j=1; j<=n; j++)
       {
          printf("*");
          printf("*");
          break;
       }
     }
   }
 }
```

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: (penalty regime: 0 %)

```
#include<stdio.h>
void func(int n){
    int c1=1,c2=0,c3=1;
    if(n==1){
        printf("*");
        c1++;
    }
    else{
        for(int i=1;i<=n;i++){
            c2+=2;
            for(int j=1;j<=n;j++){
                c3+=3;
                break;
            }
        }
    }
    int c=c1+c2+c3;
    printf("%d",c);
}
int main(){
    int n;
    scanf("%d",&n);
    func(n);
    return 0;
}
```

	Input	Expected	Got	
✔	2	12	12	✔
✔	1000	5002	5002	✔
✔	143	717	717	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Problem 3: Finding Complexity using Counter Method

Started on	Friday, 8 August 2025, 6:26 PM
State	Finished
Completed on	Sunday, 10 August 2025, 3:37 PM
Time taken	1 day 21 hours
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.

```
Factor(num) {
{
   for (i = 1; i <= num;++i)
   {
    if (num % i== 0)
       {
         printf("%d ", i);
       }
    }
 }
```

Note: No need of counter increment for declarations and scanf() and counter variable printf() statement.

Input:

A positive Integer n

Output:

Print the value of the counter variable

Answer:

```c
#include<stdio.h>
void Factor(int num){
    int c1=0,c2=1;
    for(int i=1;i<=num;i++){
        c1+=2;
        if(num%i==0){
            c2++;
        }
    }
    int c=c1+c2;
    printf("%d",c);
}
int main()
{
    int n;
    scanf("%d",&n);
    Factor(n);
    return 0;
}
```

	Input	Expected	Got	
✔	12	31	31	✔
✔	25	54	54	✔
✔	4	12	12	✔

Passed all tests! ✔

Problem 4: Finding Complexity using Counter Method

Started on Friday, 8 August 2025, 6:40 PM

State Finished

Completed on Sunday, 10 August 2025, 3:40 PM

Time taken 1 day 20 hours

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>
void function(int n)
{
    int c=1;
    for(int i=n/2;i<n; i++){
        c++;
        for(int j=1;j<n;j=2*j){
            c++;
            for(int k=1;k<n;k=k*2){
                c++;
                c++;
            }
            c++;
        }
        c++;
    }
    c++;
    printf("%d",c);
}
int main()
{
    int n;
    scanf("%d",&n);
    function(n);
}
```

	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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Problem 5: Finding Complexity using counter method

Started on	Friday, 8 August 2025, 7:05 PM
State	Finished
Completed on	Sunday, 10 August 2025, 3:42 PM
Time taken	1 day 20 hours
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 reverse(int n)
{
   int rev = 0, remainder;
   while (n != 0)
    {
        remainder = n % 10;
        rev = rev * 10 + remainder;
        n/= 10;

    }
print(rev);
}
```


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>
void reverse(int n)
{
   int rev = 0, remainder;
   int c1=1,c2=1,c3=1,c4=0;
   while (n != 0)
    {
        c1++;
        remainder = n % 10;
        c2++;
        rev = rev * 10 + remainder;
        c3++;
        n/= 10;
        c4++;
    }
    int c=c1+c2+c3+c4;
    printf("%d",c);
}
int main()
{
    int n;
    scanf("%d",&n);
    reverse(n);
}
```

	Input	Expected	Got	
✔	12	11	11	✔
✔	1234	19	19	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.