Problem 1: Finding Complexity using Counter Method

Started on	Sunday, 17 August 2025, 10:58 PM
State	Finished
Completed on	Sunday, 17 August 2025, 11:26 PM
Time taken	27 mins 55 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 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 %)

```c
#include<stdio.h>
int main(){
    int n;
    scanf("%d",&n);
    int i=1;
    int s=1;
    int counter=0;
    counter+=2;
    while(s<=n){
        counter++;
        i++;
        counter++;
        s+=i;
        counter++;
    }
    counter++;
    printf("%d",counter);
    return 0;
}
```

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

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Finish review

Back to Course

Problem 1: Finding Complexity using Counter Method

Started on	Sunday, 17 August 2025, 10:58 PM
State	Finished
Completed on	Sunday, 17 August 2025, 11:26 PM
Time taken	27 mins 55 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 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 %)

```c
#include<stdio.h>
int main(){
    int n;
    scanf("%d",&n);
    int i=1;
    int s=1;
    int counter=0;
    counter+=2;
    while(s<=n){
        counter++;
        i++;
        counter++;
        s+=i;
        counter++;
    }
    counter++;
    printf("%d",counter);
    return 0;
}
```

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

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Finish review

Back to Course

Problem 3: Finding Complexity using Counter Method

Started on	Friday, 22 August 2025, 9:20 PM
State	Finished
Completed on	Friday, 29 August 2025, 2:41 PM
Time taken	6 days 17 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>
int main(){
    int num,i;
    int counter=0;
    scanf("%d",&num);
    for(i=1;i<=num;i++){
        counter++;
        counter++;
        if(num%i==0){
        counter++;
        }
    }
    counter++;
    printf("%d",counter);
}
```

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

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Finish review

Back to Course

Problem 4: Finding Complexity using Counter Method

Started on	Friday, 29 August 2025, 2:08 PM
State	Finished
Completed on	Friday, 29 August 2025, 2:41 PM
Time taken	32 mins 51 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;
    int count=0;
    count++;
    for(int i=n/2;count++,i<n;i++){
        for(int j=1;count++,j<n;j=2*j){
            for(int k=1;count++,k<n;k=k*2){
                count++;
                c++;
            }
        }
    }
    return count;
}
int main(){
    int a;
    scanf("%d",&a);
    printf("%d",function(a));
}
```

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

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Finish review

Back to Course

Problem 5: Finding Complexity using counter method

Started on	Friday, 29 August 2025, 2:15 PM
State	Finished
Completed on	Friday, 29 August 2025, 2:42 PM
Time taken	26 mins 37 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 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>
int main(){
    int rev=0,remainder,counter=0,n;
    scanf("%d",&n);
    counter++;
    counter++;
    while(n!=0){
        counter++;
        remainder=n%10;
        counter++;
        rev=rev*10+remainder;
        counter++;
        n/=10;
        counter++;
    }
    counter++;
    printf("%d",counter);
}
```

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

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Finish review

Back to Course

Quiz navigation

1

Finish review