RAJALAKSHMI ENGINEERING COLLEGE

Started on	Tuesday, 26 August 2025, 1:33 PM
State	Finished
Completed on	Tuesday, 26 August 2025, 1:37 PM
Time taken	3 mins 54 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 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,count=0;
    count++;
    int s=1;
    count++;
    while(s<=n){
        count++;
        i++;
        count++;
        s+=i;
        count++;
    }
    count++;
    printf("%d\n",count);
}
int main(){
    int n;
    scanf("%d",&n);
    function(n);
    return 0;
}
```

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

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

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RAJALAKSHMI ENGINEERING COLLEGE

Started on	Tuesday, 26 August 2025, 1:37 PM
State	Finished
Completed on	Tuesday, 26 August 2025, 1:43 PM
Time taken	5 mins 56 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 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 %)

```c
#include<stdio.h>
void func(int n){
    int counter=0;
    if(n==1){
        printf("*\n");
    }else{
        for(int i=1;i<=n;i++){
            counter++;
            for(int j=1;j<=n;j++){
                counter++;
                counter++;
                counter++;
                counter++;
                break;
            }
        }
        counter++;
        counter++;
    }
    printf("%d\n",counter);
}
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.

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RAJALAKSHMI ENGINEERING COLLEGE

Started on	Tuesday, 26 August 2025, 1:45 PM
State	Finished
Completed on	Tuesday, 26 August 2025, 1:48 PM
Time taken	3 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

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 counter=0;
    int factorCount=0;
    for(int i=1;i<=num;++i){
        counter++;
        counter++;

        counter++;
        counter++;
        if(num%i==0){
            factorCount++;
        }
    }
    counter=(2*num)+factorCount+1;
    printf("%d\n",counter);
}
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! ✔

Correct

Marks for this submission: 1.00/1.00.

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RAJALAKSHMI ENGINEERING COLLEGE

Started on	Tuesday, 26 August 2025, 1:50 PM
State	Finished
Completed on	Tuesday, 26 August 2025, 1:56 PM
Time taken	5 mins 56 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:

```
#include<stdio.h>
void function(int n){
    int c=0;
    c++;
    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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RAJALAKSHMI ENGINEERING COLLEGE

Started on	Tuesday, 26 August 2025, 1:56 PM
State	Finished
Completed on	Tuesday, 26 August 2025, 2:01 PM
Time taken	4 mins 24 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 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 reverse_and_count(int n){
    int rev=0,remainder;
    int count=0;
    count+=3;
    while(n!=0){
        remainder=n%10;     count++;
        rev=rev*10;         count++;
        rev=rev+remainder;  count++;
        n=n/10;             count++;
    }
    return count;
}
int main(){
    int n;
    scanf("%d",&n);
    int count=reverse_and_count(n);
    printf("%d\n",count);
    return 0;
}
```

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

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

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