RAJALAKSHMI ENGINEERING COLLEGE

Started on	Wednesday, 20 August 2025, 3:42 PM
State	Finished
Completed on	Wednesday, 20 August 2025, 3:51 PM
Time taken	9 mins 18 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>
int main(void){
    long long n;
    if(scanf("%lld",&n)!=1)
    return 0;
    long long i;
    long long s;
    long long count=0;

    i=1;
    count++;
    s=1;
    count++;

    while(1){
        count++;
        if(s<=n){
            i++;
            count++;
            s+=i;
            count++;
        }else{break;

        }
    }
    printf("%lld",count);
    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	Wednesday, 20 August 2025, 3:52 PM
State	Finished
Completed on	Wednesday, 20 August 2025, 4:05 PM
Time taken	12 mins 43 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 %)

```
#include<stdio.h>
int main(void){
    long long n;
    if(scanf("%lld",&n)!=1) return 0;
    long long count=0;
    count++;
    if(n==1){
        printf("%lld",count);
        return 0;
    }else{
        long long i=1;
        while(1){
            count++;
            if(i<=n){
                long long j;
        j=1;
        count++;
        count++;
        if(j<=n){count++;
    }
    i++;
    count++;
}else{
    break;
}
}
}
printf("%lld",count);
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	Wednesday, 24 September 2025, 3:14 PM
State	Finished
Completed on	Wednesday, 24 September 2025, 3:23 PM
Time taken	8 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

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;



    scanf("%d", &num);
      int counter = 0;

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

    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	Wednesday, 24 September 2025, 3:23 PM
State	Finished
Completed on	Wednesday, 24 September 2025, 3:33 PM
Time taken	9 mins 40 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:

```c
#include<stdio.h>
int main(){
    int n;
    if(scanf("%d",&n) !=1) return 0;

    long long counter = 1;
    for(int i=n/2;i<n;i++){
        counter++;
        for(int j=1;j<n;j=2*j){
            counter++;
            for(int k=1;k<n;k=k*2){
                counter++;
                counter++;
            }
            counter++;
        }
        counter++;
    }
    counter++;
    printf("%lld\n",counter);
    return 0;
}
```

	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	Wednesday, 24 September 2025, 3:33 PM
State	Finished
Completed on	Wednesday, 24 September 2025, 3:44 PM
Time taken	10 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 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 n, rev = 0, remainder;
    int count = 0;

    scanf("%d", &n);

    count++;

    while (n != 0) {
        count++;
        remainder = n % 10;
        count++;
        rev = rev * 10 + remainder;
        count++;
        n /= 10;
        count++;
    }
    count++;


    count++;

    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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