



Started on Wednesday, 20 August 2025, 10:22 AM

State Finished

Completed on Wednesday, 20 August 2025, 10:30 AM

Time taken 8 mins 46 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 %)

```
1 #include<stdio.h>
2
3
4 void function(int n)
5 {
6     int counter=0;
7     int i=1;
8     counter++;
9     int s=1;
10    counter++;
11    while(s <=n)
12    {
13        counter++;
14        i++;
15        counter++;
16        s+=i;
17        counter++;
18    }
19    counter++;
20    printf("%d",counter);
21
22 }
23 int main(){
24
25
26     int n;
27     scanf("%d",&n);
28     function(n);
29     return 0;
30 }
```

	Input	Expected	Got	
✓	9	12	12	✓

	Input	Expected	Got	
✓	4	9	9	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

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Started on Wednesday, 20 August 2025, 10:50 AM

State Finished

Completed on Thursday, 21 August 2025, 9:49 PM

Time taken 1 day 10 hours

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 %)

```
1 #include <stdio.h>
2
3 int main() {
4     int n;
5     int count = 0;
6
7     scanf("%d", &n);
8     count++;
9     if (n == 1) {
10         count++;
11     } else {
12         for (int i = 1; i <= n; i++) {
13             count++;
14             for (int j = 1; j <= n; j++) {
15                 count++;
16                 count++;
17                 count++;
18                 break;
19             }
20             count++;
21         }
22         count++;
23     }
24
25     printf("%d", count);
26
27     return 0;
28 }
```

	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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Started on Wednesday, 20 August 2025, 10:54 AM

State Finished

Completed on Thursday, 21 August 2025, 11:29 PM

Time taken 1 day 12 hours

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:

```
1 #include<stdio.h>
2 void Factor(int num){
3     int counter=0;
4     for(int i=1; i<=num;i++){
5         counter++;
6         counter++;
7         if(num % i==0){
8             counter++;
9         }
10    }
11    counter++;
12    printf("%d",counter);
13 }
14 int main(){
15     int num;
16     scanf("%d",&num);
17     Factor(num);
18     return 0;
19 }
20 }
```

	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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Started on Thursday, 21 August 2025, 11:08 PM

State Finished

Completed on Thursday, 21 August 2025, 11:29 PM

Time taken 20 mins 36 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:

```
1 #include<stdio.h>
2 void function(int n)
3 {
4     int counter=0;
5     int c = 0;
6     counter++;
7
8     for(int i=n/2; i<n; i++){
9         counter++;
10
11         for(int j=1; j<n; j = 2 * j){
12             counter++;
13
14             for(int k=1; k<n; k = k * 2){
15                 counter++;
16
17                 c++;
18                 counter++;
19             }
20             counter++;
21         }
22         counter++;
23     }
24     counter++;
25     printf("%d",counter);
26 }
27 int main(){
28     int n;
29     scanf("%d",&n);
30     function(n);
31     return 0;
32 }
33 }
```

	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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Started on Thursday, 21 August 2025, 11:16 PM

State Finished

Completed on Thursday, 21 August 2025, 11:28 PM

Time taken 12 mins 26 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:

```
1 #include<stdio.h>
2 void reverse(int n)
3 {
4     int counter=0;
5     int rev = 0, remainder;
6     counter++;
7     counter++;
8     while (n != 0)
9     {
10         counter++;
11         remainder = n % 10;
12         counter++;
13         rev = rev * 10 + remainder;
14         counter++;
15         n /= 10;
16         counter++;
17     }
18     counter++;
19     printf("%d",counter);
20 }
21
22 int main(){
23     int n;
24     scanf("%d",&n);
25     reverse(n);
26     return 0;
27 }
28 }
```

	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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