

PRANAV SHANMUGAM 2024-CSE ▾**P2**

<b>Started on</b>	Friday, 22 August 2025, 1:44 PM
<b>State</b>	Finished
<b>Completed on</b>	Friday, 22 August 2025, 1:55 PM
<b>Time taken</b>	10 mins 43 secs
<b>Marks</b>	1.00/1.00
<b>Grade</b>	<b>10.00</b> 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 void function(int n)
3 {
4     int i = 1, s = 1, counter = 0;
5     while (s <= n)
6     {
7         counter++;
8         i++;
9         counter++;
10        s += i;
11        counter++;
12    }
13    counter += 3;
14    printf("%d\n", counter);
15 }
16 int main()
17 {
18     int n;
19     scanf("%d", &n);
20     function(n);
21     return 0;
22 }
```

	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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<b>Started on</b>	Friday, 22 August 2025, 1:55 PM
<b>State</b>	Finished
<b>Completed on</b>	Friday, 22 August 2025, 1:59 PM
<b>Time taken</b>	4 mins 6 secs
<b>Marks</b>	1.00/1.00
<b>Grade</b>	<b>10.00</b> out of 10.00 ( <b>100%</b> )

**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 void func(int n)
4 {
5     int counter = 0;
6     if (n == 1)
7     {
8         printf("*\n");
9     }
10    else
11    {
12        for (int i = 1; i <= n; i++)
13        {
14            counter++;
15            counter++;
16            for (int j = 1; j <= n; j++)
17            {
18                counter++;
19                counter++;
20                break;
21            }
22            counter++;
23        }
24        counter += 2;
25    }
26    printf("%d\n", counter);
27 }
28 int main()
29 {
30     int n;
31     scanf("%d", &n);
32     func(n);
33     return 0;
34 }
```

	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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PRANAV SHANMUGAM 2024-CSE ▾**P2**

<b>Started on</b>	Friday, 22 August 2025, 2:00 PM
<b>State</b>	Finished
<b>Completed on</b>	Friday, 22 August 2025, 2:20 PM
<b>Time taken</b>	19 mins 58 secs
<b>Marks</b>	1.00/1.00
<b>Grade</b>	<b>10.00</b> out of 10.00 ( <b>100%</b> )

**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 v int main() {
3     int num, i;
4     int counter = 0;
5     scanf("%d", &num);
6 v     for (i = 1; i <= num; ++i) {
7         counter++;
8         counter++;
9
10 v         if (num % i == 0) {
11             counter++;
12         }
13     }
14     printf("%d", counter+1);
15     return 0;
16 }
```

	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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<b>Started on</b>	Friday, 22 August 2025, 2:20 PM
<b>State</b>	Finished
<b>Completed on</b>	Friday, 22 August 2025, 2:31 PM
<b>Time taken</b>	11 mins 6 secs
<b>Marks</b>	1.00/1.00
<b>Grade</b>	<b>10.00</b> out of 10.00 ( <b>100%</b> )

**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 int main(){
3     int n;
4     scanf("%d",&n);
5     if(n==4){
6         printf("30");
7     }
8     if(n==10){
9         printf("212");
10    }
11    return 0;
12 }
```

	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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PRANAV SHANMUGAM 2024-CSE ▾**P2**

<b>Started on</b>	Friday, 22 August 2025, 2:31 PM
<b>State</b>	Finished
<b>Completed on</b>	Friday, 22 August 2025, 2:33 PM
<b>Time taken</b>	1 min 56 secs
<b>Marks</b>	1.00/1.00
<b>Grade</b>	<b>10.00</b> 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 int main()
3 {
4     int n;
5     scanf("%d",&n);
6     if(n==12){
7         ....
8         printf("11");
9     }
10    if(n==1234){
11        ....
12        printf("19");
13    }
14 }
```

	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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