

HEMASHREE R 2024-CSE ▾**H2****Started on** Wednesday, 6 August 2025, 8:29 AM**State** Finished**Completed on** Wednesday, 6 August 2025, 8:47 AM**Time taken** 17 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 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 int main() {
3     int n;
4     scanf("%d", &n);
5     int count = 0;
6     int i = 1;
7     count++;
8     int s = 1;
9     count++;
10    while (1) {
11        count++;
12        if (s > n)
13            break;
14        i++;
15        count++;
16        s += i;
17        count++;
18    }
19    printf("%d\n", count);
20}
21
```

	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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HEMASHREE R 2024-CSE

H2

Started on Wednesday, 6 August 2025, 8:47 AM

State Finished

Completed on Wednesday, 6 August 2025, 9:09 AM

Time taken 22 mins 17 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 %)

```
1 #include<stdio.h>
2 int main(){
3     int n;
4     scanf("%d",&n);
5     int count=0;
6     if(n==1){
7     }
8     else{
9         count++;
10        count+=(n+1);
11        count+=n;
12        count+=2*n;
13        count+=n;
14        }
15        }
16        printf("%d\n",count);
17    }
18 }
```

	Input	Expected	Got	
✓	2	12	12	✓
✓	1000	5002	5002	✓

	Input	Expected	Got	
✓	143	717	717	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

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HEMASHREE R 2024-CSE ▾**H2****Started on** Wednesday, 13 August 2025, 8:37 AM**State** Finished**Completed on** Wednesday, 13 August 2025, 8:43 AM**Time taken** 5 mins 32 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:

```
1 #include<stdio.h>
2 int main(){
3     int n;
4     scanf("%d",&n);
5     int c=0;
6     for(int i=1;i<=n;i++){
7         c+=2;
8         if(n%i==0){
9             c++;
10            }
11            c++;
12            printf("%d",c);
13        }
14 }
```

	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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H2

Started on Wednesday, 13 August 2025, 8:43 AM

State Finished

Completed on Wednesday, 20 August 2025, 8:26 AM

Time taken 6 days 23 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.

```
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,counter=0,c=0;
4     scanf("%d",&n);
5     counter++;
6     for(int i=n/2;i<n;i++){
7         counter++;
8         for(int j=1;j<n;j=2*j){
9             counter++;
10            for(int k=1;k<n;k=k*2){
11                counter++;
12                c++;
13                counter++;
14            }
15            counter++;
16        }
17        counter++;
18    }
19    counter++;
20    printf("%d",counter);
21 }
22 }
```

	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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H2

Started on Wednesday, 20 August 2025, 8:26 AM

State Finished

Completed on Wednesday, 20 August 2025, 8:31 AM

Time taken 4 mins 57 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 int main(){
3     int n,c=0;
4     scanf("%d",&n);
5     int rev=0,rem;
6     c++;
7     c++;
8     while(n!=0){
9         c++;
10        rem=n%10;
11        c++;
12        rev=rev*10+rem;
13        c++;
14        n/=10;
15        c++;
16    }
17    c++;
18    printf("%d",c);
19 }
```

	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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