Question 1 Correct Mark 1.00 out of 1.00 Flag question

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
5	12

Answer: (penalty regime: 0 %)

```c
#include <stdio.h>

void find(int n) {
    int i = 1;
    int s = 1;
    int counter = 0;

    counter = counter + 2;

    while (s < n) {
        counter++;

        i++;
        counter++;
        s = s + i;
```

9	12

Answer: (penalty regime: 0 %)

```c
#include <stdio.h>

void find(int n) {
    int i = 1;
    int s = 1;
    int counter = 0;

    counter = counter + 2;

    while (s < n) {
        counter++;

        i++;
        counter++;
        s = s + i;
        counter++;
    }

    counter++;

    printf("%d\n", counter);
}

int main() {
    int n;
    scanf("%d", &n);
    find(n);
    return 0;
}
```

	Input	Expected	Got	
✓	9	12	12	✓
✓	4	9	9	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Problem 2: Finding Complexity using Counter method

Started on	Friday, 8 August 2025, 9:10 PM
State	Finished
Completed on	Friday, 8 August 2025, 9:21 PM
Time taken	11 mins
Marks	1.00/1.00
Grade	**10.00** out of 10.00 (**100%**)

Question 1 Correct Mark 1.00 out of 1.00 Flag question

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;

    counter = counter + 1;

    if (n == 1) {
    }
    else
    {
        counter = counter + 1;

        for (int i = 1; i <= n; i++) {
            counter = counter + 5;
        }
    }
    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.

Problem 3: Finding Complexity using Counter Method

Started on	Friday, 8 August 2025, 9:22 PM
State	Finished
Completed on	Friday, 8 August 2025, 9:32 PM
Time taken	10 mins 31 secs
Marks	1.00/1.00
Grade	**10.00** out of 10.00 (**100%**)

Question 1 Correct Mark 1.00 out of 1.00 Flag question

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

Output:

Print the value of the counter variable

Answer:

```c
#include <stdio.h>

void Factor(int num) {
    int counter = 0;
    for (int i = 1; i <= num; i++) {
        counter++;
        counter++;
        if (num % i == 0) {
            counter++;
        }
    }
    counter++;
    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.

Problem 4: Finding Complexity using Counter Method

Started on	Friday, 8 August 2025, 9:34 PM
State	Finished
Completed on	Tuesday, 19 August 2025, 12:33 PM
Time taken	10 days 15 hours
Marks	1.00/1.00
Grade	**10.00** out of 10.00 (**100%**)

Question 1 Correct Mark 1.00 out of 1.00 Flag question

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:

A positive Integer n

Output:

Print the value of the counter variable

Answer:

```c
#include <stdio.h>

void function(int n) {
    int c = 0;
    int count = 1;

    for (int i = n/2; i < n; i++) {
        count++;
        for (int j = 1; j < n; j=2 * j) {
            count++;
            for (int k = 1; k < n; k = k * 2) {
                count++;
                c++;
                count++;
            }
            count++;
        }
        count++;
    }
    count++;
    printf("%d\n", count);
}

int main() {
    int n;
    scanf("%d", &n);
    function(n);
    return 0;
}
```

	Input	Expected	Got	
✓	4	30	30	✓
✓	10	212	212	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Problem 5: Finding Complexity using counter method

Started on	Sunday, 17 August 2025, 8:11 PM
State	Finished
Completed on	Sunday, 17 August 2025, 8:21 PM
Time taken	10 mins 52 secs
Marks	1.00/1.00
Grade	**10.00** out of 10.00 (**100%**)

Question 1 Correct Mark 1.00 out of 1.00 Flag question

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

Input:

A positive Integer n

Output:

Print the value of the counter variable

Answer:

```c
#include <stdio.h>

void reverse(int n) {
    int rev = 0, remainder;
    int count = 3;

    while (n != 0) {
        remainder = n % 10;
        count++;
        rev = rev * 10 + remainder;
        count += 2;
        n /= 10;
        count++;
    }

    printf("%d\n", count);
}

int main() {
    int n;
    scanf("%d", &n);
    reverse(n);
    return 0;
}
```

	Input	Expected	Got	
✓	12	11	11	✓
✓	1234	19	19	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00