

## Problem 1: Finding Complexity using Counter Method

|              |                                  |
|--------------|----------------------------------|
| Started on   | Sunday, 17 August 2025, 7:40 PM  |
| State        | Finished                         |
| Completed on | Sunday, 17 August 2025, 8:02 PM  |
| Time taken   | 21 mins 43 secs                  |
| Marks        | 1.00/1.00                        |
| Grade        | <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 %)

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Falling back to raw text area.

```
#include<stdio.h>
int main()
{
    int n;
    scanf("%d",&n);
    int count=0;
    int i=1;
    count++;
    int s=1;
    count++;
    while(s<=n) {
        count++;
        i++;
        count++;
        s+=i;
        count++;
    }
    count++;
    printf("%d",count);
}
```

|   | 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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