RAJALAKSHMI ENGINEERING COLLEGE

Started on	Wednesday, 20 August 2025, 3:51 PM
State	Finished
Completed on	Wednesday, 20 August 2025, 3:56 PM
Time taken	4 mins 43 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 %)

```
#include <stdio.h>

int main() {
    int n;
    scanf("%d", &n);

    int counter = 0;

    int i = 1; counter++;         // count initialization
    int s = 1; counter++;         // count initialization

    while (s <= n) {
        counter++;                // count condition check
        i++; counter++;           // count i++
        s += i; counter++;        // count s += i
    }
    counter++;                    // count final condition check (fails)

    printf("%d\n", counter);
    return 0;
}
```

	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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