Problem 1: Finding Complexity using Counter Method

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:

```c
#include <stdio.h>

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

    int count = 0;

    int i = 1; count++;   // assignment counted
    int s = 1; count++;   // assignment counted

    while (1) {
        count++;          // condition check
        if (s > n) break;

        count++;          // i++
        i++;

        count++;          // s += i
        s += i;
    }

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

	Input	Expected	Got	
✔	9	12	12	✔
✔	4	9	9	✔

```c
#include <stdio.h>

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

    int count = 0;

    int i = 1; count++;   // assignment counted
    int s = 1; count++;   // assignment counted
```