

7 RAKSHITA N 2024-IT ▾R2**Started on** Tuesday, 18 November 2025, 10:51 AM**State** Finished**Completed on** Tuesday, 18 November 2025, 10:58 AM**Time taken** 6 mins 46 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
3  int main() {
4      int num;
5      scanf("%d", &num);
6
7      int counter = 0;
8
9      for (int i = 1; i <= num; i++) {
10         counter++;
11         counter++;
12
13         if (num % i == 0) {
14             counter++;
15         }
16     }
17
18     counter++;
19     printf("%d", counter);
20
21     return 0;
22 }
```

	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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