

KUMARA GURU S 2024-CSE ▾

K2

Started on Wednesday, 8 October 2025, 10:43 AM**State** Finished**Completed on** Wednesday, 8 October 2025, 10:47 AM**Time taken** 3 mins 28 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 %)

```
1 #include <stdio.h>
2 void function(int n) {
3     int i = 1;
4     int s = 1;
5     int c = 0;
6     while (s <= n) {
7         c++;
8         i++;
9         c++;
10        s += i;
11        c++;
12    }
13    c++;
14    c+=2;
15    printf("%d\n", c);
16 }
17
18 int main() {
19     int n;
20     scanf("%d", &n);
21     function(n);
22     return 0;
23 }
24
```

	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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KUMARA GURU S 2024-CSE ▾**K2****Started on** Wednesday, 8 October 2025, 10:47 AM**State** Finished**Completed on** Wednesday, 8 October 2025, 10:49 AM**Time taken** 1 min 54 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 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 %)

```
1 #include<stdio.h>
2 int main(){
3     int n;
4     scanf("%d ",&n);
5     int c=5*n+2;
6     printf("%d\n",c);
7 }
```

	Input	Expected	Got	
✓	2	12	12	✓
✓	1000	5002	5002	✓

	Input	Expected	Got	
✓	143	717	717	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

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Started on Wednesday, 8 October 2025, 10:49 AM**State** Finished**Completed on** Wednesday, 8 October 2025, 10:52 AM**Time taken** 2 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

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 void Factor(int num) {
4     int c = 0;
5
6     for (int i = 1; i <= num; ++i) {
7         c++;
8         c++;
9         if (num % i == 0) {
10             c++;
11         }
12     }
13     c++;
14     printf("%d\n", c);
15 }
16 int main() {
17     int n;
18     scanf("%d", &n);
19     Factor(n);
20     return 0;
21 }
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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K2

Started on Wednesday, 8 October 2025, 10:52 AM**State** Finished**Completed on** Wednesday, 8 October 2025, 10:55 AM**Time taken** 3 mins 27 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.

```
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:

```
1 #include <stdio.h>
2
3 void function(int n) {
4     int c = 0;
5
6     for (int i = n / 2; i < n; i++) {
7         c++;
8         for (int j = 1; j < n; j = 2 * j) {
9             c++;
10            c++;
11            for (int k = 1; k < n; k = k * 2) {
12                c++;
13                c++;
14            }
15        }
16        c++;
17    }
18    c+=2;
19    printf("%d\n", c);
20 }
21 int main() {
22     int n;
23     scanf("%d", &n);
24     function(n);
25     return 0;
26 }
27
```

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

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

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Started on Wednesday, 8 October 2025, 10:56 AM**State** Finished**Completed on** Wednesday, 8 October 2025, 10:58 AM**Time taken** 2 mins 38 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.

```
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

Answer:

```
1 #include <stdio.h>
2 void reverse(int n) {
3     int rev = 0, remainder;
4     int c = 0;
5     while (n != 0) {
6         c++;
7         remainder = n % 10;
8         c++;
9         rev = rev * 10 + remainder;
10        c++;
11        n /= 10;
12        c++;
13    }
14    c+=3;
15    printf("%d\n", c);
16 }
17 int main() {
18     int n;
19     scanf("%d", &n);
20     reverse(n);
21     return 0;
22 }
23
```

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

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

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