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   void factor();
3   int main()
4 ▾ {
5       int n,c=0;
6       scanf("%d",&n);
7       factor(n,c);
8   }
9   void factor(int n,int c)
10 ▾ {
11 ▾  {
12      for (int i=1;i<=n;++i)
13 ▾     {
14        c++;
15        if (n%i== 0)
16 ▾        {
17             //printf("%d ", i);
18             c++;
19          }
20       }
21       c+=n;
22       c++;
23       printf("%d",c);
24     }
25  }
```

	Input	Expected	Got	
✔	12	31	31	✔
✔	25	54	54	✔
✔	4	12	12	✔