Finding Time Complexity of algorithms

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Question 1
Correct
Mark 1.00 out of 1.00
Flag question

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 %)

```c
#include<stdio.h>
void func(int n){int a=2;
    if(n==1){
    }
    else{
        for(int i=1;i<=n;i++){
            a++;
            for(int j=1;j<=n;j++){
                a++;
                a++;
                a++;
                a++;
                break;}}}
    printf("%d",a);
}
int main(){
    int n;
    scanf("%d",&n);
    func(n);
}
```

	Input	Expected	Got	
✔	2	12	12	✔
✔	1000	5002	5002	✔
✔	143	717	717	✔

Passed all tests! ✔

Question 1

Correct

Mark 1.00 out of 1.00

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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:

```c
#include<stdio.h>
void factor(int n){
    int a=0;
    for(int i=1;i<=n;i++){a++;
        if(n%i==0){a++;
        }a++;
    }
    a++;
    printf("%d",a);
}
int main(){
    int n;
    scanf("%d",&n);
    factor(n);
}
```

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

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question 1

Correct

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Flag question

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:

```c
#include<stdio.h>
void func(int n){
    int c=0,a=1;
    for(int i=n/2;i<n;i++){a++;
        for(int j=1;j<n;j=2*j){a++;
                for(int k=1;k<n;k=k*2){a++;
                    c++;a++;
                }a++;
            }a++;
    }a++;printf("%d",a);
}
int main(){
    int a;scanf("%d",&a);
    func(a);
}
```

	Input	Expected	Got	
✔	4	30	30	✔
✔	10	212	212	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question 1

Correct

Mark 1.00 out of 1.00

Flag question

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:

```c
#include<stdio.h>
void reverse(int nu){
    int rev=0,remainder,n=2;
    while(nu!=0){n++;
        remainder=nu%10;n++;
        rev=rev*10+remainder;n++;
        nu/=10;n++;
    }n++;
    printf("%d",n);
}
int main(){
    int a;scanf("%d",&a);
    reverse(a);
}
```

	Input	Expected	Got	
✔	12	11	11	✔
✔	1234	19	19	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.