**FINDING TIME COMPLEXITY OF ALGORITHMS**

PROBLEM 3:

Finding Complexity using Counter Method

AIM:

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);  
        }          
    }   
 }

CODE:

#include<stdio.h>

int main(){

int counter=0;

int i,num;

scanf("%d",&num);

for (i = 1; i <= num;++i)

{

counter++;

if (num % i== 0)

{counter++;

//printf("%d ", i);

}counter++;

} counter++;

printf("%d",counter);

}

INPUT:  
12 25 4

OUTPUT:

31 54 12