FINDING TIME COMPLEXITY OF ALGORITHMS

PROBLEM 2:

Finding complexity using counter method

AIM:
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;
      }
    }
  }
 }
```

CODE:

```
#include<stdio.h>

int main()

{   int counter=0;

   int n;

   scanf("%d",&n);
```

```
  if(n==1)
  {counter++;
  }
  else
  {
     counter++;
     for(int i=1; i<=n; i++)
     {
        counter++;
        for(int j=1; j<=n; j++)
        {
           counter++;
           counter++;
           counter++;
           break;
        }counter++;
     }counter++;
  }
  printf("%d",counter);
}
```

INPUT:

2 1000 143

OUTPUT:

12 5002 717