

TIME COMPLEXITY OF

1.

```
for( int i=0;i<=n;i++){  
for( int j=0;j<=n;j++){  
cout<<"Hi";  
}
```

Answer: **Time complexity is $O(n^2)$ as there are two nested loops each running for n times**

2.)

```
for( int i=0;i<=n;i=i*3){  
for( int j=0;j<=n;j++){  
cout<<"Hello";  
}  
}
```

Answer: **Time complexity is $O(n \log n)$ as there are two nested loops The outer loop runs for $3^k \leq n$ times which is $\log n$ and the inner loops runs for n times**