1. **Compute the time complexity of following code:**

int a = 0;

for (i = 0; i < N; i++) {

for (j = N; j > i; j--) {

a = a + i + j;

}

}

1. **Compute the time complexity of following code:**

int i, j, k = 0;

for (i = n / 2; i <= n; i++) {

for (j = 2; j <= n; j = j \* 2) {

k = k + n / 2;

}

}

1. **Compute the time complexity of following code:**

int a = 0, i = N;

while (i > 0) {

a += i;

i /= 2;

}

1. **Solve the recurrence relation and compute the complexity**

T(n)=3T(n-1), if n>0,

T(0) = 1

1. **Solve the recurrence relation and compute the complexity**

f(n)= 2f(n-1)+1 for n>1

f(0)=0