Briefly explain the time complexities for the given loops.

Question:1

```
int a = 0, b = 0;
    for (i = 0; i < N; i++) {
        for (j = 0; j < N; j++) {
            a = a + j;
        }
    }
    for (k = 0; k < N; k++) {
        b = b + k;
    }
```

Question:2

```
int a = 0;
    for (i = 0; i < N; i++) {
        for (j = N; j > i; j--) {
            a = a + i + j;
        }
    }
```

Arrange the following functions in ascending order of their time complexities.

`f1(n) = 2^n`

`f2(n) = n^(3/2)`

`f3(n) = nLogn`

`f4(n) = n^(Logn)`

For Eg:- f1<f2<f3<f4 where f1 takes less time than f2 and f2 takes less time than f3 and f3 takes less time than f4.