

# [15-112] Lecture 17

## Lecture 17 Poll 1 (SOLO)

If  $s$  is a set,  $L$  is a list, and  $d$  is a dictionary, which of the following is  $O(1)$ ? Check all that apply.

- A. `if x in s`
- B. `set(L)`
- C. `s.add(4)`
- D. `s.remove(4)`
- E. `if k in d`
- F. `L.append(2)`
- G. `if x in L`
- H. None of the above
- I. I don't know

## Lecture 17 Poll 1 (GROUP)

If  $s$  is a set,  $L$  is a list, and  $d$  is a dictionary, which of the following is  $O(1)$ ? Check all that apply.

- A. `if x in s` ->  $O(1)$
- B. `set(L)` ->  $O(N)$
- C. `s.add(4)` ->  $O(1)$
- D. `s.remove(4)` ->  $O(1)$
- E. `if k in d` ->  $O(1)$
- F. `L.append(2)` ->  $O(1)$
- G. `if x in L` ->  $O(N)$
- H. None of the above
- I. I don't know

<b>Complexity class</b>	<b>Common name</b>
$O(1)$	Constant
$O(\log n)$	Logarithmic
$O(n)$	Linear
$O(n \log n)$	(just " $n \log n$ ")
$O(n^2)$	Quadratic
$O(2^n)$	Exponential

## Lecture 17 Poll 2 (SOLO)

What is the complexity of the following code?

```
def big0(L):  
    for i in range(10000):  
        for n in L:  
            print("Hey there!")  
    return
```

A.  $O(1)$

B.  $O(N)$

C.  $O(N^2)$

D.  $O(\log N)$

E. I don't know

## Lecture 17 Poll 2 (GROUP)

What is the complexity of the following code?

```
def big0(L):  
    for i in range(10000):  
        for n in L:  
            print("Hey there!")  
    return
```

A.  $O(1)$

B.  $O(N)$

C.  $O(N^2)$

D.  $O(\log N)$

E. I don't know

# Big-O Analysis Practice Worksheet