

1.) for number #4 brackets where n is

- length of input string. Each input is processed once.

Time Complexity $O(n)$

Space Complexity $O(n)$ because worst case

it will push all characters onto stacks.

- for number #5 time would be $O(1)$

because initializing two stacks takes $O(1)$

we iterate through each character once and for length as well a push/pop

Space will be $O(n)$ both stacks

will hold all elements which means

Max num of elements = length of string.

- for number #6 time will be $O(1)$ because iterate through each character exactly once

Space will be $O(n)$ because holding all input string = maximum number.