

### STEP ONE: simplifying expressions

- 1)  $O(n)$
- 2)  $O(n)$
- 3)  $O(1)$
- 4)  $O(n^2)$
- 5)  $O(n)$
- 6)  $O(n)$
- 7)  $O(n \log n)$
- 8)  $O(2^n)$
- 9)  $O(1)$
- 10)  $O(n^2)$

### STEP TWO: calculating time complexity

- 1)  $O(n)$  # of operations bound by a multiple of  $n$
- 2)  $O(n)$
- 3)  $O(1)$   $n$  capped @ 10,  $i \neq 1$
- 4)  $O(n)$
- 5)  $O(n^2)$
- 6)  $O(n)$  output dependent on string input

### STEP THREE: short answer

1. T
2. T
3. F
4. Time complexity of `.indexOf()`:  $O(n)$
5. Time complexity of `.includes()`:  $O(n)$
6. Time complexity of `.forEach()`:  $O(n)$  + dependent on callback func
7. Time complexity of `.sort()`:  $O(n \log n)$
8. Time complexity of `.unshift()`:  $O(n)$
9. Time complexity of `.push()`:  $O(1)$
10. Time complexity of `.splice()`:  $O(n)$  or  $O(1)$
11. Time complexity of `.pop()`:  $O(1)$
12. Time complexity of `Object.keys()`:  $O(n)$
13. Space complexity of `Object.keys()` func:  $O(n)$