

Name _____

Problem 1 ~ 4: 10 pts each 5:10 pts (5+5)

- 1) A class's _____ members can only be used by its own methods.
a) public b) protected c) private d) package access

- 2) Java Interface can contain default implementation. (True/False)

- 3) Java Interface always has the public access modifier (True/False)

- 4) In the worst case, a quick sort is _____.
a) $O(n)$ b) $O(1)$ c) $O(\log_2 n)$ d) $O(n^2)$

- 5) Find $f(n)$ when $n = 3^k$, where f satisfies the recurrence relation,
 $f(n) = 2f(n/3) + 4$ with $f(1) = 1$.
 - (1) Calculate $f(3)$, $f(9)$, and $f(27)$ from the recurrence relation.

 - (2) Find a closed form of $f(n)$.