

## Lecture 22 Exercises

### CS 51P – Fall 2023

Convert the following expressions to “Big O” notation:

1)  $(4n + 10)^4$

$O(n^4)$

2)  $\sqrt{2n^3 + n^2 + 10}$

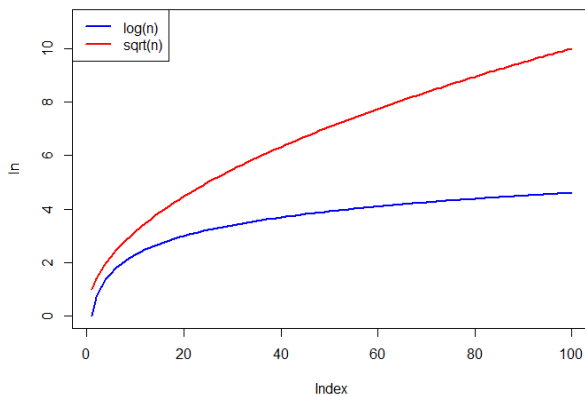
$O(n^{3/2})$

3)  $100000n + \log n$

$O(n)$

4)  $\sqrt{n} + 10 \log n$

$O(\sqrt{n})$



5)  $2^n + n^2$

$O(2^n)$

What is the running time of insertion sort?

$O(n^2)$