Name: Jingyi Ouyang
PID: A53108909

11. $n^2 + n! = \Theta(n^n)$ False

n^n is always bigger than n^2 and n!. You can not find a constant to meet the requirement of big-Omega.

12. $100n^2 + n = \Theta(n^2)$ True

when constant is 101, $100n^2 + n = O(n^2)$

when constant is 99, $100n^2 + n = \Omega(n^2)$

13. n + (n)^0.5 = Θ(n) True

when constant is 1, n + (n)^0.5 = Ω(n)

when constant is 2, n + (n)^0.5 = O(n)

14. n*(1/n) + log 8 = Θ(1) True

when constant is 1, n*(1/n) + log 8 = Ω(1)

when constant is 100, n*(1/n) + log 8 = O(1)

15. $n+\log n^n = \Theta(n\log n)$ True

when constant is 1, $n+\log n^n = \Omega(n\log n)$

when constant is 2, $n+\log n^n = O(n\log n)$