

CSCI 310 – Data Structures – Spring 2019

HW 05 – Big- O Problems (10 points)

1. (4 points) Use the definition of Big- O to show $5n^2 + n \in O(n^2)$.
2. (2 points) Use the definition of Big- O to show $d \in O(1)$ for any constant $d > 0$. Note: Because of this result, we refer to all Constant-time complexity functions simply as $O(1)$.
3. (4 points) Use the definition of Big- O to show $6n^2 + 12 \in O(n^3)$.

What to turn in: This assignment is to be turned in through Blackboard. You can type up your solution using a computer program or you can prepare your solution by hand and scan it.