CSCI 310 – Data Structures – Spring 2019
HW 05 – Big-O Problems (15 points)

1. (5 points) Use the definition of Big-O to show $5n^2 + n \in O(n^2)$.

2. (5 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. (5 points) Use the definition of Big-O to show $6n^2 + 12 \in O(n^3)$.