1. Yes. O-notation allows for gross overestimation, so this would be true.
    - f(n) <= cg(n) An >= n0
    - Let c = 3 An >= 1
    - 3n <= 3n^3 An >= 1
2. No. Omega-notation is a way to show that some measurement will never grow better than a certain rate. However, it is obvious that at some point n0, 3n + 9 will have a better growth rate than n^3.