Exercise Sheet 1
COMP6741: Parameterized and Exact Computation

2016, Semester 2

1. Arrange the following functions in increasing order of growth: $n^{\log n}$; $(\log n)^n$; 2^n; 2^{2^n}; 2^{n^2}; $n!$; 1.01^n; 50^n; $2^{n/2}$; $2^{\sqrt{n}}$.

2. Show that Vertex Cover can be solved in polynomial time for graphs of maximum degree at most 2.

3. A vertex cover C of a graph G is *minimal* if no strict subset of C is a vertex cover. Show that any graph has at most 2^k minimal vertex covers of size at most k. Furthermore, show that given G and k, all minimal vertex covers of G of size at most k can be enumerated in time $2^k n^{O(1)}$.