Graph Theory Cheat Sheet

Chordality

Chordal graph: one in which all cycles of 4 or more vertices have a chord.

Chord: an edge that is **NOT** part of the cycle but connect two vertices of the cycle.

<u>**Remark**</u>: every induced cycle in the graph should have **EXACTLY 3** vertices!

Perfect Elimination

Perfect elimination ordering: ordering of vertices Θ such that for every vertex $\theta \in \Theta$, θ and its neighbors $\text{Ne}(\theta)$ that occur after θ in the ordering form a clique.

Lexicographic breadth-first search: linear time algorithm for ordering the vertices of a graph.