

# COMP9020 Week 9 Recap

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## Graph Theory

- Definitions and notation: vertices, edges, paths, cycles, connectedness, isomorphisms
- Important graphs: Trees, Complete graphs, complete  $k$ -partite graphs
- Graph traversals: DFS/BFS, Eulerian path/circuit, Hamiltonian path/cycle
- Graph properties: Chromatic number, Clique number, Planarity

## Combinatorics

- Basic counting rules: Disjoint sets, Cartesian products
- Handling duplication/restrictions

# Need to know for this course

- Graph definitions and important graph classes
- How to show/calculate graph properties:
  - Connectedness
  - Eulerian/Hamiltonian traversals
  - Chromatic number
  - Clique number
  - Planarity
- Interactions between graph properties