Class 2

Summary

Terminology

alphabet

- set of n elements called letters

String

- ordered sequence of n letters from the alphabet

permutation

- Every letter of the alphabet must be there exactly once

simple graph

- no loops

adjacent

- edge from vertex a->b

degree

- number of adjacent vertices

complete

- all possible edges, no loops

path

- sequence of vertices, must be distinct

cycle

- must come back to the first vertex

connected graph

- path in **G** from any vertex **i** to any vertex **j**
- can go from any vertex to any other vertex

disconnected graph

- can not get to every vertex from any other vertex

tree

- connected and has no cycles
- minimum number of edges while still being connected

- same tree if the structure is the same. We don't care about the vertex labels

isomorphic

- Having a similar structure or appearance but being of different ancestry.

Sets and subsets

How many ways can we choose ...
Choosing n elements is the same as choosing (removing) |S|-n

Strings and permutations

graphs

trees