Recurrence, probability, graph theory, trees, etc.:

Our slides:

http://discrete4math.weebly.com/uploads/2/5/3/9/25393482/8probability.ppt

http://discrete4math.weebly.com/uploads/2/5/3/9/25393482/9relations.ppt

Links:

http://en.wikipedia.org/wiki/Recurrence\_relation

http://en.wikipedia.org/wiki/Conditional\_probability

http://en.wikipedia.org/wiki/Homeomorphism\_%28graph\_theory%29

http://en.wikipedia.org/wiki/Incidence\_matrix

http://en.wikipedia.org/wiki/Planar\_graph#Euler.27s\_formula

http://en.wikipedia.org/wiki/Platonic\_solid

http://en.wikipedia.org/wiki/Four\_color\_theorem

Videos:

Conditional Probability, 9 minutes:

https://www.youtube.com/watch?v=eHfhpAhGdvY

Recurrence Relation, 7 minutes:

https://www.youtube.com/watch?v=HzV6tY6OuBk

Plane Graphs, 1 minute:

https://www.youtube.com/watch?v=FaucNXaYQxY

Euler's Formula for Plane Graphs, 9 minutes:

https://www.youtube.com/watch?v=5ywif1Zpeo4

Incidence, adjacency matrix of graph, 11 minutes:

https://www.youtube.com/watch?v=fMuTwUYhxeY

Isomorphic Graphs, 8 minutes:

https://www.youtube.com/watch?v=Xq8o-z1DsUA

Kuratowsky's theorem, 57 minutes:

https://www.youtube.com/watch?v=kubJIJMOS8I

Matching graph, 16 minutes:

https://www.youtube.com/watch?v=m7rQIhHyABw