# We must understand better the graph theory, the trees theory, decision trees, game trees, Boolean algebra and Karnaugh map.

# Our slides:

# http://discrete4math.weebly.com/uploads/2/5/3/9/25393482/10graphs.ppt

# http://discrete4math.weebly.com/uploads/2/5/3/9/25393482/11shortest.ppt

# http://discrete4math.weebly.com/uploads/2/5/3/9/25393482/12trees.ppt

# http://discrete4math.weebly.com/uploads/2/5/3/9/25393482/13trees.ppt

# http://discrete4math.weebly.com/uploads/2/5/3/9/25393482/14circuits14etc.ppt

# http://discrete4math.weebly.com/uploads/2/5/3/9/25393482/15boolean15algebra15.ppt

# Other relevant links:

# http://en.wikipedia.org/wiki/Graph\_theory

# http://en.wikipedia.org/wiki/Seven\_Bridges\_of\_K%C3%B6nigsberg

# http://en.wikipedia.org/wiki/Graph\_%28mathematics%29#Undirected\_graph

# http://en.wikipedia.org/wiki/Bipartite\_graph

# http://en.wikipedia.org/wiki/Multigraph

# http://en.wikipedia.org/wiki/Ore%27s\_theorem

# http://en.wikipedia.org/wiki/Kuratowski%27s\_theorem

# http://en.wikipedia.org/wiki/Dijkstra%27s\_algorithm

# http://en.wikipedia.org/wiki/Spanning\_tree

# http://en.wikipedia.org/wiki/Kruskal%27s\_algorithm

# http://en.wikipedia.org/wiki/Binary\_tree

# http://en.wikipedia.org/wiki/Decision\_tree

# http://en.wikipedia.org/wiki/Game\_tree

# http://en.wikipedia.org/wiki/Boolean\_algebra

# http://en.wikipedia.org/wiki/Karnaugh\_map

# Videos:

# Graph theory, 12 minutes:

# https://www.youtube.com/watch?v=HmQR8Xy9DeM

# Konigsberg Bridge Problem, 6 minutes:

# https://www.youtube.com/watch?v=2iovbcPwAro

# Bipartite Graphs, 8 minutes:

# https://www.youtube.com/watch?v=cnpHYPV92xg

# Euler Circuits and Euler Paths, 10 minutes:

https://www.youtube.com/watch?v=REfC1-igKHQ

# Hamiltonian Circuits and Paths, 8 minutes:

https://www.youtube.com/watch?v=AamHZhAmR7o

Ore’s theorem, 7 minutes:

https://www.youtube.com/watch?v=r5Xz2xUI2ok

# Planar graphs, 4 minutes:

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

# Graph Coloring, 5 minutes:

https://www.youtube.com/watch?v=8JxXHl4M2lE

# Dijkstra's Algorithm, 5 minutes:

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

# Spanning Trees, 3 minutes:

https://www.youtube.com/watch?v=0ljjRM8hWjU

# Kruskal's Algorithm:

# https://www.youtube.com/watch?v=71UQH7Pr9kU

# Binary Tree, 16 minutes:

https://www.youtube.com/watch?v=H5JubkIy\_p8

# Tree Traversal, 5 minutes:

https://www.youtube.com/watch?v=BEf\_K5epgvI

# Decision Tree, 7 minutes:

https://www.youtube.com/watch?v=a5yWr1hr6QY

# Game Tree:

https://www.youtube.com/watch?v=-4Lx\_FZkpp8

# Boolean algebra, 10 minutes:

https://www.youtube.com/watch?v=gj8QmRQtVao

# Karnaugh Map, 8 minutes:

https://www.youtube.com/watch?v=nwRkIbkc03g