MATH 1300 - Nature of Mathematics

Spring 2014

Assignment #3

CHANGED due date: Monday, March 3

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1. p.221 #2

2. p.221 #4

3. Using the graphs on page 223, calculate the redundancy for Figure 7-29(a), Figure 7-31(b), and Figure 7-32.

4. p.223 #26 Just parts (a) and (c).

Problems 5, 6, and 7 refer to the following list of proposed electrical power lines connecting 8 small towns labeled A through H. Each line gives the cost of building that line.

A to B cost 16
A to D cost 12
A to H cost 8
B to C cost 40
B to F cost 15
C to E cost 42
D to F cost 28
D to H cost 11
E to F cost 25
F to G cost 30
F to H cost 19

5. Draw the network labeling the vertices and weights on edges.

6. Use Kruskal's algorithm to find a Minimum Spanning Tree. You should list the order in which edges are added to the tree and the total weight of the resulting tree.

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