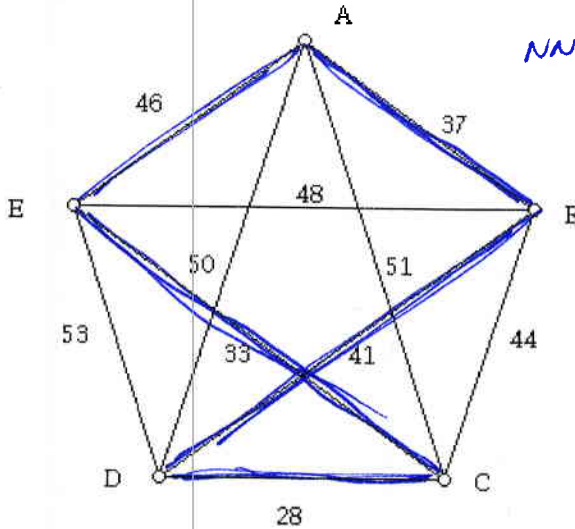


Instructions: Show all work. Answer each question as completely as possible. Use exact values. For counting problems you may use scientific notation (with three significant figures) for any numbers larger than a million.

- Use the graph below to approximate the minimal Hamilton circuit for the graph below. Use the Nearest Neighbor Algorithm and the Cheapest Link (Sorted Edges) Algorithm. Do they give the same result? Which is cheaper in this instance?

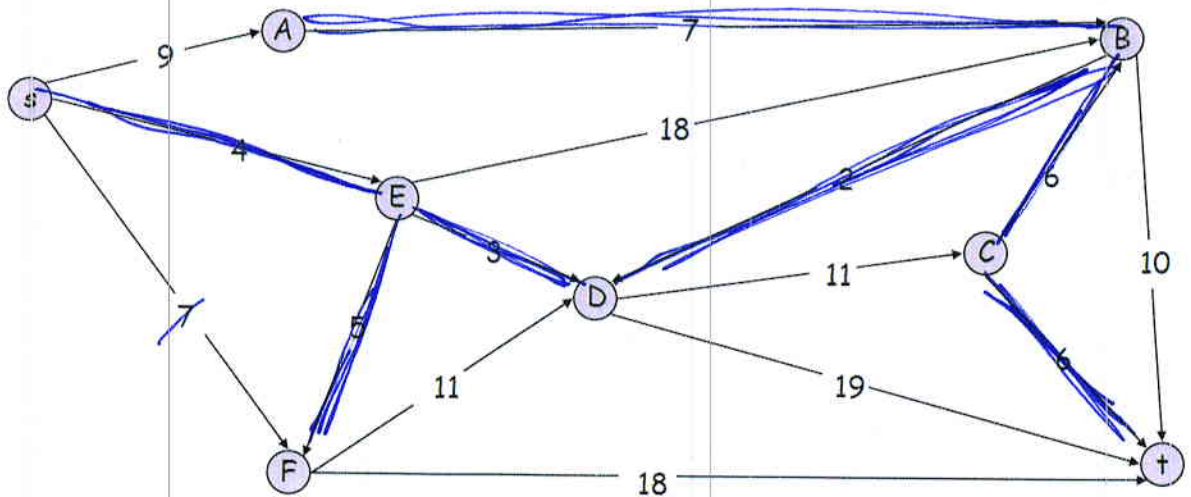


NNA ABCDEA
 $37 + 44 + 28 + 53 + 46 = 208$

CL
 $46 + 37 + 41 + 28 + 33 = 185$

Cheapest link is cheaper
 this time.
 the results are not the same

- Find the minimal spanning tree using Kruskal's Algorithm for the graph below.



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