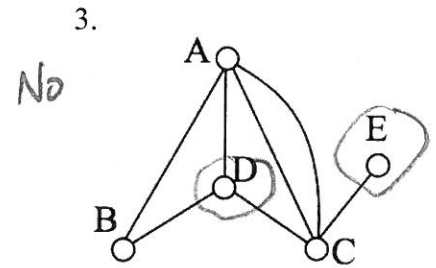
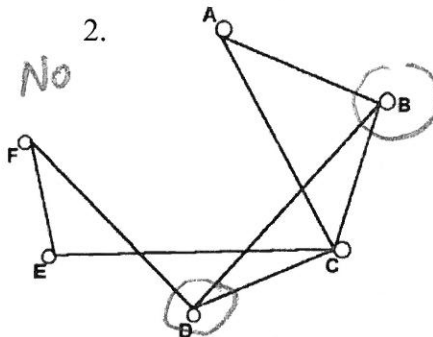
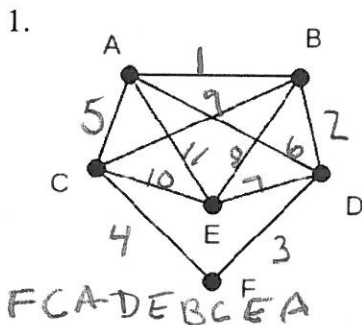


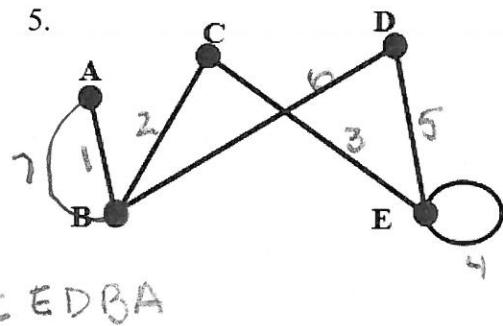
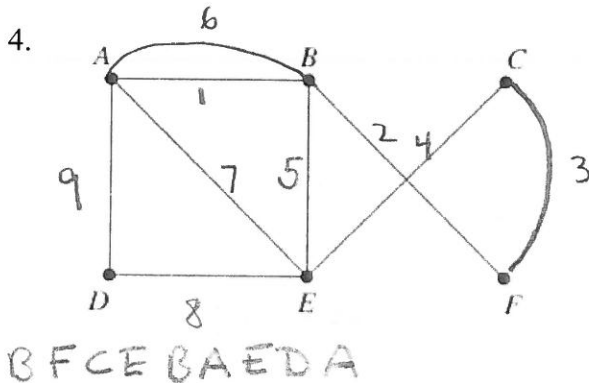
Pre Calculus
Graph Theory Review

Name _____
Date _____

For each of the following state whether it has a Euler circuit or not. If it does have a Euler circuit name it starting at vertex A.



For each of the following Eulerize the graph. State the Euler circuit starting at vertex A.

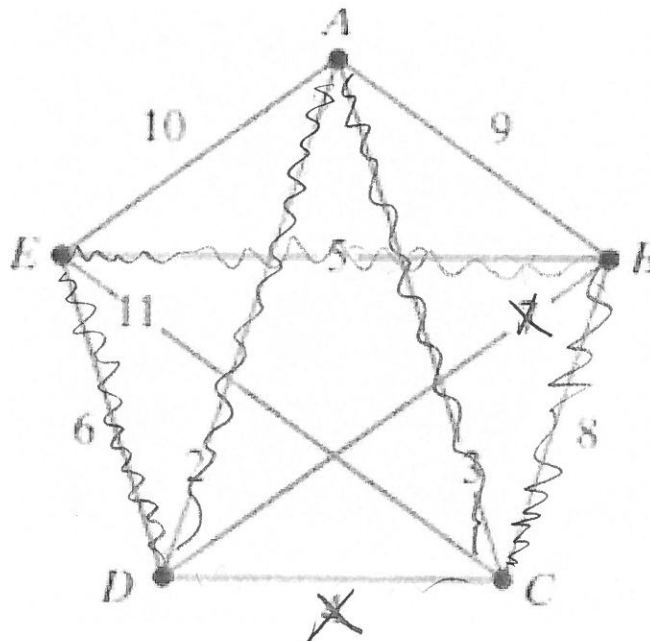


6. How do you know if a graph has an Euler circuit or not? All vertices have even degree

7. For the graph below find a Hamiltonian circuit:

- Using the nearest neighbor algorithm starting at vertex A. State the circuit's weight.
- Using the cheapest link algorithm. State the circuit's weight

Nearest Neighbor
ADCBEA
2
4
8
5
10
29



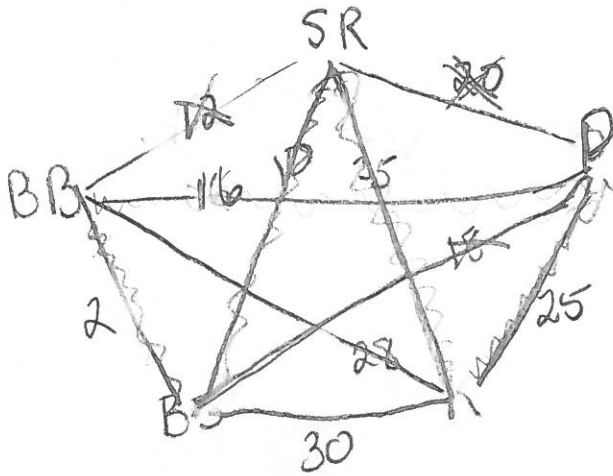
Cheapest Link
ACBEDA
ADEBCA
3
8
5
6
2

24

8. Jodie needs to run some errands. She needs to go to five stores, Shop Rite, Payless, Kohls, the bagel store and Blockbuster. Listed in the table below is the time it will take her to go from store to store.

	Shop Rite	Payless	Kohls	Bagel store	Blockbuster
Shop Rite		20	35	10	12
Payless	20		25	18	16
Kohls	35	25		30	28
Bagel Store	10	18	30		2
Blockbuster	12	16	28	2	

Create a weighted graph of the times. Use the nearest neighbor algorithm, starting at Shop Rite, and the cheapest link algorithm. State the shortest time for each algorithm and state which algorithm gives the shortest time to do the errands.



NN

SR, BS, BB, P, K, SR

10
2
16
25
35

88

CL

SR, BS, BB, P, K, SR

10
2
16
25
35

88

They are the same