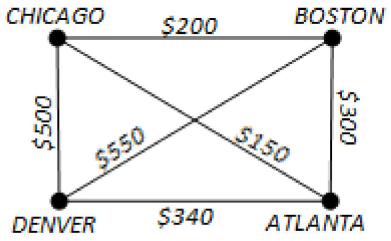
Name: _____ Class: _____ Date: _____ ID: A

Section 06-08 - Sample Quiz - TSP Graphs

Multiple Choice
Identify the choice that best completes the statement or answers the question.

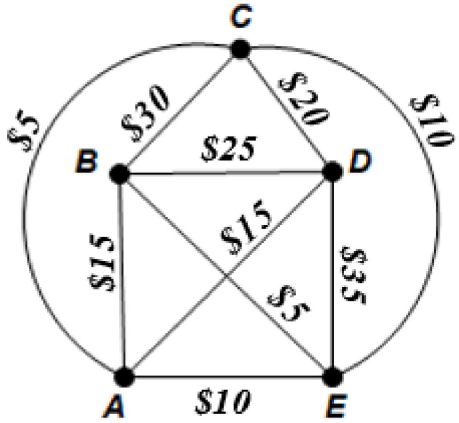
____ 1. **Traveling Sales Person Graph (TSP)**
As a business person you need to visit each of the following cities once. You need to start in Atlanta and end in Atlanta. Use the "**Nearest Neighbor**" Algorithm to find one of the cheaper routes to visit each city and return home again.

Trip Between	Cost
Atlanta and Boston	$300
Atlanta and Chicago	$150
Atlanta and Denver	$340
Boston and Chicago	$200
Boston and Denver	$550
Chicago and Denver	$500



a. ATL-BOS-CHI-DEN-ATL
b. ATL-CHI-BOS-DEN-ATL
c. ATL-DEN-BOS-CHI-ATL
d. ATL-BOS-DEN-CHI-ATL

____ 2. **Traveling Sales Person Graph (TSP)**
Jaqueline is using an online ride service to start from her home (vertex A) visit 4 consecutive destinations (B, C, D, E) and return home (vertex A). She first obtained all of the prices of traveling between locations and then, using the "**Nearest Neighbor Algorithm**" she would like to determine an inexpensive route to make a round trip and visit all 4 places.

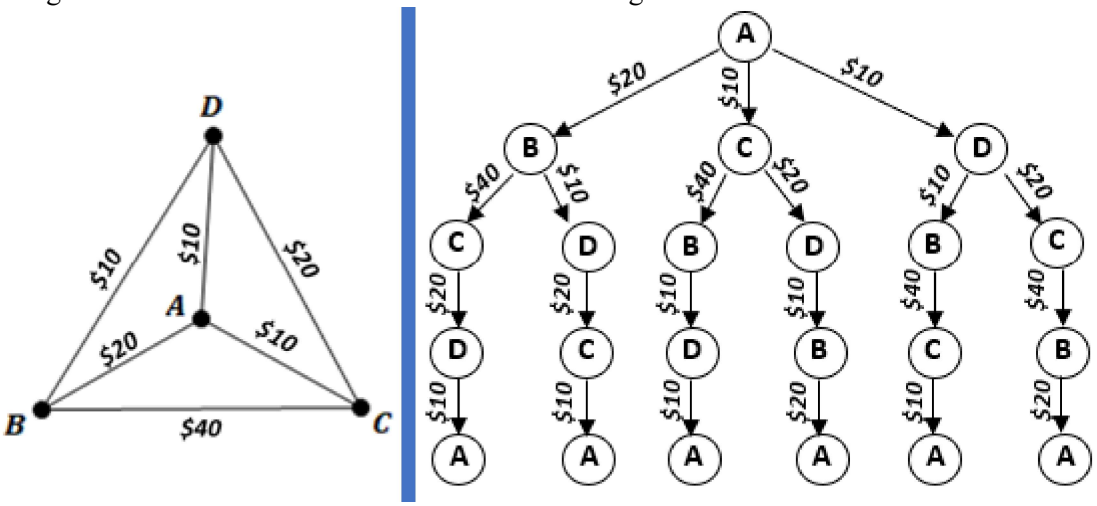


Which route would the "**Nearest Neighbor Algorithm**" suggest?

a. AEBDCA
b. AEDCBA
c. ACEBDA
d. ACDBEA

____ 3. **Traveling Sales Person Graph (TSP)**

Kelly is using an online ride service to start from her home (vertex A) visit 3 consecutive destinations (B, C, D) and return home (vertex A). She first obtained all of the prices of traveling between locations and then, using the "**Brute Force Method**" she created this diagram..



What would be the cost of the cheapest round trip from vertex A to all the other vertices once and back to vertex A?

a. $50
b. $60
c. $70
d. $90