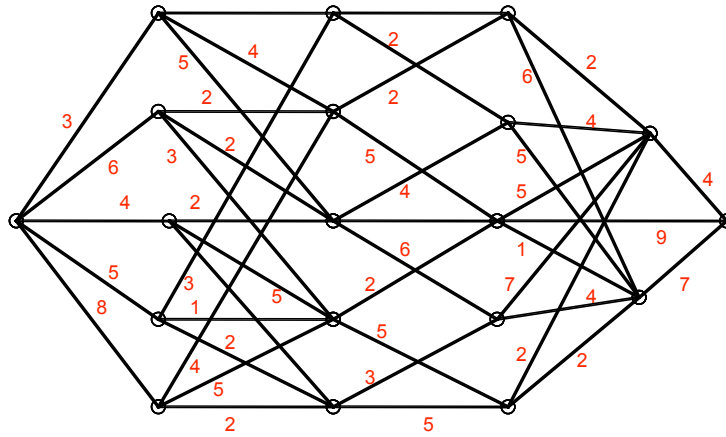


► Problem 11.1-8

Solve the Chinese Postman Problem for the weighted graph.



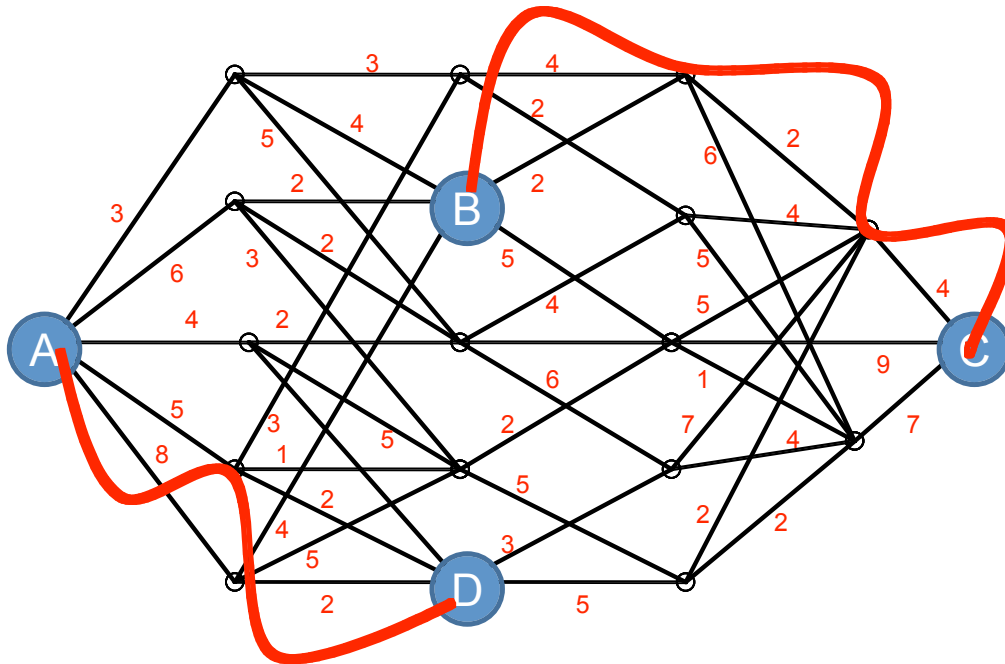
**Solution.** The four vertices of odd degree are  $\{A, B, C, D\}$  and the shortest path labels for all partitions are shown as follows:

$$\{A, B\}, \{C, D\}: (3 + 4) + (4 + 2 + 5) = 7 + 11 = 18$$

$$\{A, C\}, \{B, D\}: (3 + 4 + 2 + 2 + 4) + (4 + 2) = 15 + 6 = 21$$

$$\{A, D\}, \{B, C\}: (5 + 2) + (2 + 2 + 4) = 7 + 8 = 15$$

So, we see that the solution is to add copies of edges indicated by the RED lines.



□