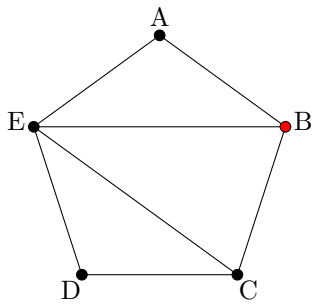
7.8 On constate que le graphe est semi-eulérien, car tous les sommets, hormis B et C, sont de degré pair.

Appliquons l'algorithme de Fleury pour déterminer un chemin semi-eulérien.

1)



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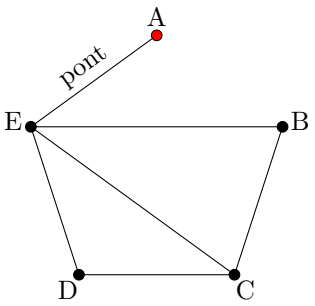

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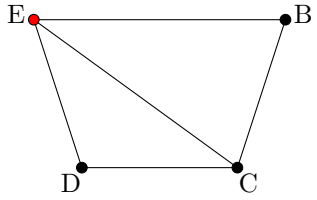

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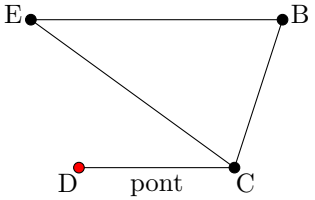

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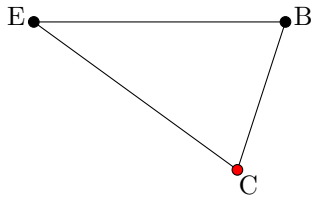

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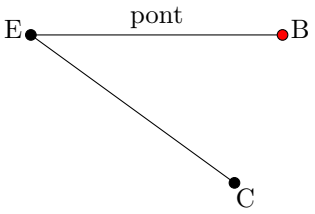

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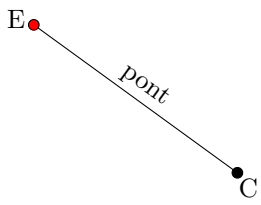
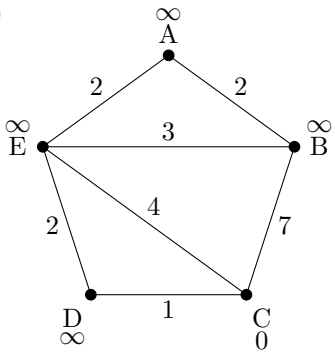


8)

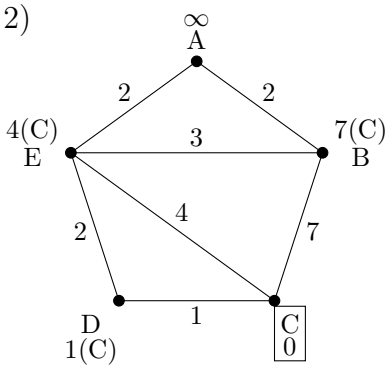
On a ainsi trouvé un chemin semi-eulérien : BAEDCBEC, dont le poids vaut $2+2+2+1+7+3+4=21$.

Il reste à utiliser l'algorithme de Dijkstra pour trouver le chemin le plus court menant de C à B.

1)



2)



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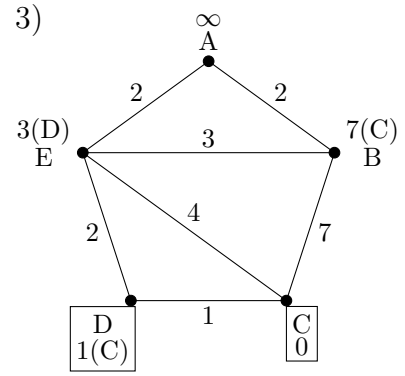

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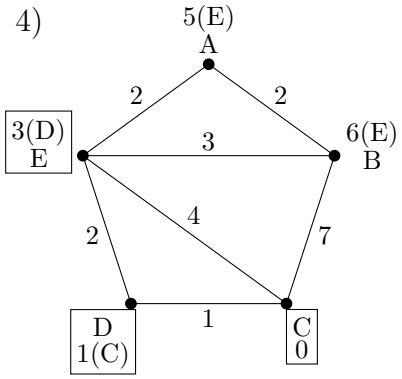
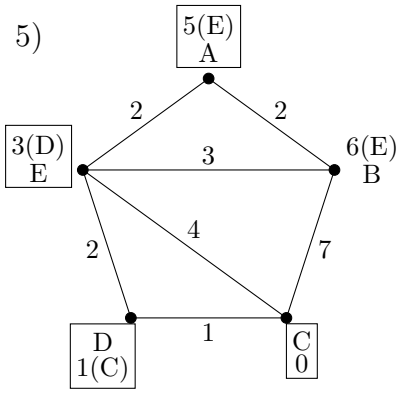
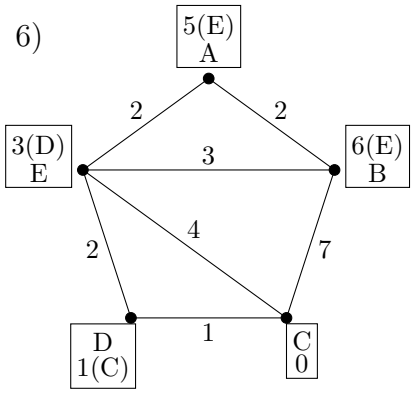


5)



6)



Le chemin le plus court menant de C à B est donc : CDEB, de poids 6.

En définitive, le postier devra parcourir le chemin BAEDCBECDEB de poids $21 + 6 = 27$.