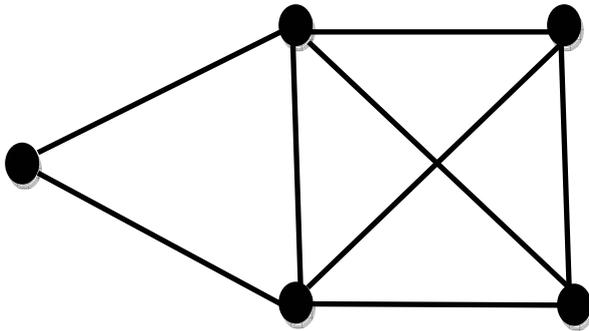# Tutorial Session (7)

Exercise 1:

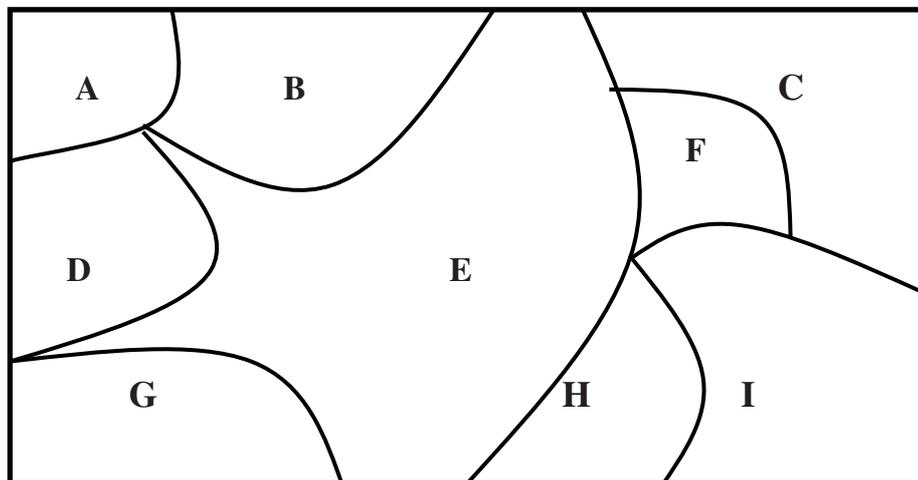Show that the following graph admits an Eulerian chain.

Exercise 2:

Does the Königsberg Bridge Problem have a solution?

Exercise 3:

How many colors are needed to color the map below, knowing that two neighboring countries must not be colored with the same color? A point is not considered as a border.

Exercise 4:

Three teachers **P1**, **P2**, **P3** must teach, next Monday, a certain number of class hours to three classes **C1**, **C2**, **C3**:

- **P1** must teach **C1** for **2** hours and **C2** for **1** hour.
- **P2** must teach **C1** for **1** hour, **C2** for **1** hour, and **C3** for **1** hour.
- **P3** must teach **C1** for **1** hour, C2 for **1** hour, and **C3** for 2 hours.

1. Model this problem as a graph and specify its type.
2. Determine the number of time slots required.
3. Using this graph, propose a possible timetable.