1. True or False:
   (a) If a graph $G$ has chromatic number 5, then it is 6-colorable. **TRUE / FALSE**
   (b) If a graph $G$ has chromatic number 5, then it is 4-colorable. **TRUE / FALSE**

2. (a) Redraw the following graph so that no pair of edges cross each other. Be sure to label your vertices accordingly.

(b) Is this graph PLANAR? **YES / NO**

(c) How many vertices, edges, and faces does your drawing in part (a) have? (Don’t forget to count the outer face!)

\[
|V| = 6, \quad |E| = 11, \quad |F| = 7.
\]

3. Properly color the following graph using at most 3 colors (for instance, you can label the vertices with labels R, G, B).