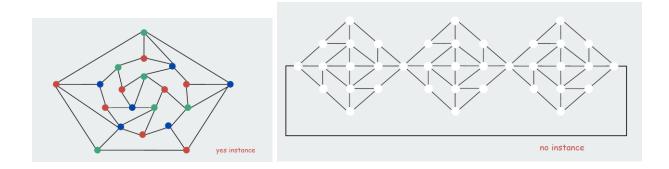
## **Homework 10**

Question: 3-COLOR. Given a graph, is there a way to color the vertices red, green, and blue so that no adjacent vertices have the same color?



Show that 3-satisfiability reduces to graph 3-colorability. Give a step by step construction [25 points] and proof [25 points]