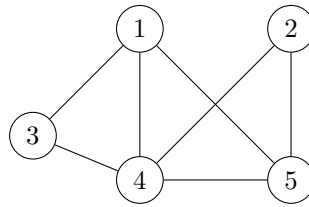Algorithms
Vertex Cover Project Worksheet

Suppose you have the following graph:

1. List all possible vertex covers, and the number of vertices for each. Which one(s) are optimal?

2. Use the greedy algorithm choosing the vertices with the most uncovered edges, what is the result?

3. The greedy algorithm is actually pretty good. In many cases it produces the optimal solution, however this is not always the case. Show that the greedy algorithm does not always return the optimal solution.
   Hint: Find a counterexample.