Math 4060 Midterm   March 8, 2019   SHOW ALL WORK

Choose **5** from the following 7 problems. **Clearly indicate your choices**. You may attempt all problems for additional partial credit as discussed in class. Note each problem is worth 20 points.

Circle the numbers of the 5 problems you would like graded.

1   2   3   4   5   6   7

1.) Calculate, etc.

2.) Describe how to mathematically model the following problem. Clearly define

(a) your (di)graph (e.g. what your vertices/edges or arcs/ etc mean) and the graph theory problem,

(b) Solve the graph theory problem.

(c) Explain how the solution found in part (b) can be applied to the problem you are modeling.

3.) Define   Give an example of   Justify your answer.

4.) Define   Give an example of   Justify your answer.

5.) Define   Prove

6.) Define   Prove

7.) Define   Prove