General Guidelines:
This assignment will NOT be collected, nor graded. There will be NO quiz based on this assignment. However, there will be similar problems in Final exam. So you should carefully complete this assignment as if it were to be graded.

1. (0 points). Page 581, Problem 4, (b), (c), (d).
2. (0 point). Page 581, Problem 6, (a), (c), (e).
3. (0 point). Page 581, Problem 3, (a), (d).
4. (0 point). Page 582, Problem 32.
5. (0 point). Page 582, Problem 34 (a), (c)
6. (0 point). Page 582, Problem 36 (c), (e)
7. (0 point). Page 596, Problem 14 (a), (b), (c), (d).
8. (0 point). For each of the relations represented by the following directed graph, determine if the relation is:
   (i) reflexive? (ii) symmetric? (iii) antisymmetric? (iv) transitive?

   ![Diagram 1](image1)
   ![Diagram 2](image2)
   ![Diagram 3](image3)

9. (0 point). Page 615, Problem 2 (a), (b), (d).
   (You ONLY need to decide whether each of the relations is an equivalence relation or not. You don’t need to do anything else.)
10. (0 point). Page 615, Problem 16. What are the equivalence classes of this relation?
11. (0 point). Page 630, Problem 2 (b), (c), (d).