Homework, week 2, due September 22

1. Exercises 1.25; 1.29 (ii), (iii); 1.31; 1.33 (iii)-(iv); 1.35 (complete the sketch in the hints).
2. Exercises 2.9 and 2.11.
3. Let $X$ be the set consisting of cities, states, and lakes within the United States. Consider the relations “is contained in,” “contains,” “is the capital of.” Which of the properties of reflexivity, symmetry, antisymmetry, and transitivity do each of these relations have?

Optional problems. Exercises 1.23, 1.26, 1.28, 1.32, 2.12.