be beneficial. (*Hint:* Think of equivalence between classes.)

6. Discuss the difference between the following statements, and draw graphs to illustrate the difference:

   X supports the proposal; Y supports the proposal; Z supports the proposal.

   The group of X, Y, and Z supports the proposal.

7. Prove the inferred formulas at the end of section 2.7 using the previous axioms.

8. Discuss why RDF and RDFS do not allow logical contradictions. Any RDF/S document is consistent; thus it has at least one model.

9. Try to map the relational database model on RDF.

10. Compare entity-relationship modeling to RDF.

11. Model part of a library in RDF Schema: books, authors, publishers, years, copies, dates, and so on. Then write some statements in RDF. Use the Turtle syntax and make sure that your RDF is syntactically valid using a validator. See http://librdf.org/parse or http://www.rdfabout.com/demo/validator/

12. Write an ontology about geography: cities, countries, capitals, borders, states, and so on.

13. Right a small web page about yourself. Identify the concepts and relations in the page and build a small ontology representing these. If possible, make use of a preexisting ontology. Mark up the page using this ontology.

In the following you are asked to think about limitations of RDFS. Specifically, what should actually be expressed, and can it be represented in RDF Schema? These limitations will be relevant in chapter 4, where we present a richer modeling language.

1. Consider the classes of males and females. Name a relationship between them that should be included in an ontology.