

**Section 1.1:** Exercises 4(b,d,e,f), 6, 10, 14(c,e). Hints and remarks:

- in Exercise 10 only write T or F, no explanation is needed;
- in Exercise 14, make tables for all possible truth values of  $p$ ,  $q$ , and  $r$ , and take the truth values of  $p$ ,  $q$ , and  $r$  in the following order: TTT, TTF, TFT, TFF, FTT, FTF, FFT, FFF;
- the tautologies from Practice Problem 1.1.7 are very useful.

**Section 1.2:** Exercises 4, 6, 12, 16, 18. Hints and remarks:

- in Exercise 4 only write the negation, no explanation is needed;
- in Exercise 6 assume that  $x$  is a real number, and write very brief (one sentence) explanation and/or give a counterexample to justify your claim;
- the statement in Exercise 12(e) is false, so you have to find a counterexample, and give a detailed explanation why your counterexample works (to construct a counterexample, write down the negation of the statement, and then think of an example for which this negation holds).

**Food for Thought:** Sec. 1.1, exercises 3, 5, 7, 9; Sec. 1.2, exercises 1, 3, 5, 11, 15.

*Remark:* The “Food for Thought” (“FFT”) problems are problems that you should look at and think about, but they do not need to be turned in. Some of the FFT problems will be very useful for you when you are working on the homework. Many FFT problems have hints or solutions in the back of the book.