

Homework #18, Part C

\*\*\*\*\*Part C ONLY\*\*\*\*\*

Follow the separate general guidelines for Parts A,B,C.

**C: Final exercises:**

1. Section 5.2 of Epp book, exercises 29, 31
2. This exercise makes a connection between the introductory set theory from Section 5.1 of the Epp book and Exercise 4.1 from the Boole section of the Truth project, which you should review.

Let  $X$  be the set of all mountains,  $Y$  be the set of all valleys,  $Z$  be the set of all things rich in minerals, and  $W$  be the set of all things rich in vegetation.

- (1) (an analogy to part (1) in Exercise 4.1) Boole states that “these symbols of Logic are in their use subject to definite laws, partly agreeing with . . . the laws of the corresponding symbols in the science of Algebra.” Use the set theoretic symbols from Section 5.1 of the Epp book to express a set theoretic identity obtained by comparing parts (h) and (i) of Exercise 4.1. Prove the set identity you obtained.