

## PROBLEM SET #9

**Problem 1.** Pugh (2nd edition) chapter 1 problem 1.

**Problem 2.** Pugh (2nd edition) chapter 1 problem 2.

**Problem 3.** Pugh (2nd edition) chapter 1 problem 6.

**Problem 4.** Pugh (2nd edition) chapter 1 problem 8.

**Problem 5.** Show that in general  $(A - B) \cup B \neq A$ .

**Problem 6.** Given an example of a binary relation which is

- (a) reflexive and symmetric, but not transitive
- (b) reflexive, but neither symmetric nor transitive
- (c) symmetric, but neither reflexive nor transitive
- (d) transitive, but neither reflexive nor symmetric