Homework assignment 7 (due Monday, March 8)

Solve the following problems

1. Do Project 5.21(ii)

2. Prove that if A is a subset of a set B, then $A \cup B = B$.

3. Let $f : A \to B$ be a function and let U and V be subsets of A. Prove that

$$f(U \cap V) \subset f(U) \cap f(V)$$

Can you reverse the above inclusion?

4. Let U and V be subsets of X. Simplify $U \cap \overline{\overline{V} \cup U}$.