1. Give the commutative, associative, and idempotent laws for union.

   Ans:
   
   *They are* \( A \cup B = B \cup A \), \( (A \cup B) \cup C = A \cup (B \cup C) \), and \( A \cup A = A \), resp.

2. Fill in the blank: The most important technique for a proof of inclusion of one set in another is *the pick-a-point method*.

3. Fill in the blank: For sets, to prove \( A = B \), prove that \( A \subseteq B \) and \( B \subseteq A \).

4. (Example 7 and Pract. Prob. 7) Prove that \( \left( A - D \right) \cup \left( B - D \right) = \left( A \cup B \right) - D \), and supply a reason for each step of your proof.

   *(See text, p. 99-100, for solution.)*