

# Proofs Involving Sets #1

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**Instructions.** Prove the following.

1.  $(A \setminus B) \subseteq (A \cup B)$

2.  $A \cap B = A \Rightarrow A \subseteq B$

3.  $(A \cup B) = B \Rightarrow A \subseteq B$

4.  $A \subseteq B \Rightarrow B^c \subseteq A^c$

5.  $(A \cap B) \subseteq A$

6.  $A \subseteq (A \cup B)$