187 §3- DISCRETE MATHEMATICS - Quiz 2

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Name _____

1. Conjecture: If A, B, C are sets, then

$$A \cap (B \setminus C^c) = C \cap (B \setminus A^c).$$

   Use a Venn diagram to determine whether the conjecture is true or not, and provide a counterexample in case it is false.

2. Conjecture: If A, B, C are sets, then

$$(A \setminus B) \cup C = A \setminus (B \cup C).$$

   Use a Venn diagram to determine whether the conjecture is true or not, and provide a counterexample in case it is false.

3. Write the given set in simplified notation:

$$\big((-6, 7] \cup (3, 6]\big) \cap (-\infty, 5).$$