

Kerry Ojakian's CSI 30 Class
Class Assignment #5

1. If A and B are sets in Python, write commands to calculate the following

(a) $A \cup B$

(b) $B \cap A$

(c) $(A \cup B) - (B \cap A)$

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2. If $A = \{4, 8, 2, 9\}$ and $B = \{9, 4, 1\}$ are sets in Python, determine the values of the following Python expressions, then check by typing in the appropriate commands.

(a) $A.intersection(B)$

(b) $(A.union(B)).difference(A)$

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3. Prove that $A - B = A \cap \overline{B}$, for sets A and B (do it using Venn Diagrams).

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4. Prove that $(A \cap B) \cup (A \cap \overline{B}) = A$ for sets A and B (do it using a membership table).
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5. Prove that $(A^c)^c = A$ for any set A (do it from the definitions).

6. Prove that $A \cap \overline{A} = \emptyset$ for any set A (do it from the definitions).
