

14. Complete the following assignment prior to Meeting #4:

A. Study our notes from Meeting #3 and comprehend Jim's sample responses to the Quiz #3 prompts that are posted on *Canvas*.

B*. Examine each of the following propositions to determine whether or not it is true; display your choice by circling either "T" or "F" (Please post the resulting document (as a PDF file) on the indicated *Assignment* link of *Canvas*.):

i. $(A = \{0, 1, 3\} \wedge B = \mathbb{N}) \Rightarrow A - B = B - A$

T ☒ F

ii. $7 \in \mathbb{N} \times \mathbb{N}$

T ☒ F

iii. $\mathbb{N} \times \mathbb{N} \subset \mathbb{R} \times \mathbb{R}$

☒ T F

iv. $\forall A \in \{\text{sets}\}, A^c - A = V \Rightarrow A = \emptyset$

☒ T F

v. $\forall A \in \{\text{sets}\}, A \cap \emptyset = A$

T ☒ F

vi. $A, B \in \{\text{sets}\} \Rightarrow A \cap B \subset A$

T ☒ F

vii. $A \in \{\text{sets}\} \Rightarrow A \cap A^c = \emptyset$

☒ T F

viii. $A \in \{\text{sets}\} \Rightarrow A \cup A^c = V$

☒ T F

ix. $\forall A \in \{\text{sets}\}, V - A^c = A$

☒ T F

x. $(\mathbb{R} - (\mathbb{I} \cup \mathbb{Q})) \cap \{x \in \mathbb{R} : x \leq 0\} = [0, \infty)$

T ☒ F

xi. $V = \mathbb{Z} \Rightarrow \{\neg n : n \in \omega\}^c = \mathbb{N}$

☒ T F

xii. $(7, 0) \in \mathbb{N} \times \mathbb{N}$

T ☒ F

C. Compare your responses to the 12 homework prompts from 14-B to the sample responses and accompanying explanations posted on *Canvas*.

D. Comprehend the entries from Lines #011–012 from our *Glossary* document.