MA 1971 Bridge to Higher Mathematics

Quiz 1

I affirm that I have not consulted my text, notes or any reference, paper or electronic, or any person once I opened and/or looked at this quiz.

Signature:

Show all work needed to reach your answers.

| 1. (| (10 points) |) Please | complete | the | following | truth | table. |
|------|--------------|----------|----------|-----|-----------|------------------------|--------|
|------|--------------|----------|----------|-----|-----------|------------------------|--------|

| A | B | C | $A \wedge C$ | $\neg B$ | $\neg(A \Rightarrow C)$ | $((\neg A) \lor B)) \land C$ | $(B \Rightarrow (A \lor C)) \Leftrightarrow ((C \lor (\sim B)) \Rightarrow A)$ |
|---|---|---|--------------|----------|-------------------------|------------------------------|--|
| Т | F | Т | | | | | |
| F | Т | Т | | | | | |

2. (10 points) Let $A, B, C \subset U$ for some universe U. Please show that $C - (A \cup B)$ is a subset of $A^{\circ} - B$.

3. (5 points) Suppose that A and B are statements. Is $B \implies A$ the same as $A \lor \neg B$? Please explain why or why not.

Name:

D Term, 2021