EXERCISES OF WEEK THREE

Exercise 1. Suppose that there are two sentences P and Q such that

$$P \Leftrightarrow (P \Rightarrow Q).$$

Show that Q is true.

Exercise 2. Translate into the formal language the following sentence

"For every y there exists a unique x such that f(x) = y"

Exercise 3. In the following table

$\in$	A	B	C	D
A	0	1	0	1
B	1	0	0	1
C	0	1	0	0
D	0	0	0	0

Find the elements and the proper classes. State whether the following classes exist. In the affermative case, find the classes they correspond to (for example, the empty class exists and $\emptyset = C$).

1. the complement class A'
2. $A \cap B$
3. $B \cup C$
4. the universal class $\mathscr{U}$.

Is the Class Construction Axiom satisfied?

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