These are the axioms, which were introduced at various places in the notes. Some of them involve defined notions.

Axiom 0. There is at least one set.

Axiom 1. (*Extensionality*) **If a and b have the same members, then $a = b$.**

Axiom 2. (*Pairing*) **For any sets a, b there is a set c which has exactly a and b as members.**

Axiom 3. (*Union*) **For any set A there is a set B such that for all x, $x \in B$ iff $x \in a$ for some $a \in A$.**

Axiom 4. (*Comprehension*) **If A is a given set and $P(x)$ is a property of sets x, then there is a set B whose elements are exactly those members x of A for which the property $P(x)$ holds.**

Axiom 5. (*Power set*) **For any set A, there is a set B whose members are exactly all of the subsets of A.**

Axiom 6. *Axiom of choice.* **For any sets A, B and any function f mapping A onto B there is a function $g : B \to A$ such that $f \circ g = \mathrm{Id}_B$.**

Axiom 7. (*Foundation*) **If A is a nonempty set, then A has an element a such that $a \cap A = \emptyset$.**

Axiom 8. (*Infinity*) **There is a set A such that $\emptyset \in A$, and for every $a \in A$, also $a \cup \{a\} \in A$.**

Axiom 9. (*Replacement*) **If F is a class function and A is a set, then the collection of all sets $F(a)$ with $a \in A$ and a in the domain of F is a set.**