

Econ 204–2025

List of Theorems for the Final Exam

You are responsible for the statements of all theorems stated in the text or in class. Understanding the proofs of theorems may help you to answer some questions, so you are advised to try to understand the key ideas behind proofs. In addition, you will be asked to state and prove *one* of the following theorems:

1. The supremum property (Theorem 1.6.8)
2. Uniqueness of limits of sequences in metric spaces (Theorem 2.2.3).
3. The Contraction Mapping Theorem 2.7.16.
4. Every closed subset of a compact metric space is compact (Theorem 2.8.14)
5. Every compact subset of a metric space is closed (Theorem 2.8.15)
6. Two vector spaces X and Y over the same field are isomorphic if and only if $\dim X = \dim Y$ (Theorem 3.3.3).