

MA341 — Homework #1
Due Wednesday, January 29, in class

For the following problems, *justify all of your answers!* To address consistency you need to either produce one model, or else you have to explain how the system leads to a contradiction. To address independence, for each particular axiom you need to either produce two models (one in which all axioms hold, and the other in which the particular axiom does not hold but the others do), or else you have to explain how the axiom can be deduced from the other axioms in the system. To address the categoric property you need to either explain why there is essentially only one model, or else produce two essentially different (nonisomorphic) models.

1. Problem 1.2.2
2. Problem 1.2.3
3. Problem 1.2.4
4. Problem 1.2.5