

## Unit 0: Introduction, 8/26/03

Note: All take-home exercises are due at the beginning of the following class meeting (unless otherwise specified).

### Exercise: Object Description

At the beginning of today's lecture, we analyzed a Barbie doll as an example of modeling a real-world object. This is a similar exercise on an object of your choice. In the lecture, we introduced that an object can be represented as a "mathematical structure" and that such a representation can be specified by "logical statements." In this exercise, you do *not* need to worry about the logic-structure distinction (or connection). We will develop some idea about it during the first several weeks and continue discussing it through the semester. To do this exercise, follow the instruction below, focusing on how to describe an object in plain English.

Choose one object (preferably, something we all know but difficult to imagine). Give a description of the object. In doing this, try to satisfy the following requirements:

1. The description must be in plain English and understandable by a typical college student as well as a typical professor.
2. The description must consist of a list of logical statements (sentences in English). Each statement must focus on a small number of properties. That is, do not give a single, long paragraph to explain every aspect.
3. The description must be sufficient to characterize the object. That is, the description should not characterize an object different from what you are thinking of.
4. The description must be as concise as possible. That is, do not include excessive statements.

In your answer, **do not** explicitly disclose what the object is. Prepare to discuss your description in class.

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