

# Models

Some notes about models, and classes.

## Class of Structures

Given a formula  $\varphi$ , the class of structures is all models that satisfy  $\varphi$ . There are certain classes that can be described using different logics. Following are classes that can be described using FOL.

### Elementary (EC)

A Class is elementary if a single sentence can describe it. If there are multiple sentences describing it, one can take the conjunction and turn them into a single sentence.

### Extended Elementary

Need a set of sentences to describe the class. My understanding is that it may also be referred to the axiom schema of the structure being defined.