A Course in Model Theory I:

Introduction[1]

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[1]This **preliminary draft** is dated from January 17, 2015. The book will be published by Cambridge University Press. The book is approximately 93.82% complete, I expect the final version to have about 745 pages, many sections of the current version will be revised and few will be added. I hope to have a stable version of this volume soon.
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Exercise #=701.
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Finite model theory arose as an independent field of logic from consideration of problems in theoretical computer science. Basic concepts in this field are finite graphs, databases, computations etc. One of the underlying observatios behind the interest in finite model theory is that many of the problems of complexity theory and database theory can be formulated as problems of mathematical logic, provided that we limit ourselves to finite structures. While the objects of study in finite model theory are finite structures, it is often possible to make use of infinite structures in the proofs. W