

Solutions for Exercises in Unit 1

Exercise 1

The proof is by induction on the form of the M -formula to be preserved. As indicated, the difficult case is the \exists case. If u witnesses the existential formula in M , then Fu witnesses it in N . Conversely, if v witnesses it in N , then $F^{-1}v$ witnesses it in M . Of course, this last holds only if F^{-1} is well-defined everywhere on N .

