Homework #4

(all questions have equal weight)

1. Enderton: Section 2.2, exercise #13 (pg. 100) [That is, prove that if h is an homomorphism from $\mathcal{A}$ to $\mathcal{B}$ and s is any substitution, then for all terms t, $h(\overline{s}(t)) = \overline{h \circ s}(t)$.]

2. Enderton: Section 2.2, exercise #16 (pg. 101)

3. Enderton: Section 2.2, exercise #17(a) (pg. 101)

4. Enderton: Section 2.2, exercise #18 (pg. 102)

5. Which subsets of the integers $\mathbb{Z}$ are definable in the structure $(\mathbb{Z}, <)$ (where $<$ is the usual ordering)? [For the definable sets, provide defining formulas; then prove that no other sets are definable.]

6. Enderton: Section 2.2, exercise #26 (pg. 104) [For a structure $\mathcal{A}$, Th $\mathcal{A}$ is the set of all sentences true in $\mathcal{A}$.]

The homework is DUE Friday, February 20 at 10AM in class.