Math 571: Mathematical Logic
2nd homework set, due at 2:25pm on Monday, Sept. 23
Bring your solutions to class, or slide them under the door of Van Vleck 513.

1. Do exercise 1.2.5 from Enderton
2. Do exercise 1.2.8 from Enderton
3. Do exercise 1.5.10 from Enderton
4. Do exercise 1.5.11 from Enderton
5. Do exercise 1.7.3 from Enderton
6. Do exercises 1.7.5 through 1.7.7 in Enderton
7. For one of the sets of formulas below, find a truth valuation v such that $\bar{v}(\phi) = T$ for all ϕ in the set. For the other, find a finite subset which is not satisfiable.
   (a) $X := \{(A_i \leftrightarrow \neg A_{i+1} \mid i \in \mathbb{N}\}$
   (b) $X := \{((A_i \wedge A_j) \leftrightarrow \neg A_k \mid \text{distinct } i, j, k \in \mathbb{N}\}$