Problem Set II. Due at beginning of class, Tuesday, 2/20.

All problems concern the language L. Structures (1),(2), (3), and (4) refer to the examples on pages 30 and 31 of the text.

1. Decide whether the sentence $\forall x \exists y [yPx]$ is true of structure (1), and give a full proof, using assignments, of your conclusion.

2. Same as problem 1 for the sentence $\exists x \forall y [yPx]$.

3. Give, without proof, a sentence which is true of structure (1) but false of (3) and (4).

4. Same as 3, but with (3),(1), and (4) in place of (1),(3), and (4).

5. Same as 3, with (4),(1), and (3) in place of (1),(3), and (4).

6. Can you find a sentence true of (1) but false of (2)? If you can, give it, if you cannot, discuss briefly.