

L6. Model Theory  
Homework Assignment 4.

Exercise 1. Prove that for every formula  $\varphi$  of  $\mathcal{L}_1^*$ :

$$\mathcal{B} \models \varphi \iff \mathcal{O} \models \varphi \iff \varphi \in T_w$$

(where  $\mathcal{L}_1^*$ ,  $\mathcal{B}$ ,  $\mathcal{O}$ ,  $T_w$  are defined in the proof of the Omitting Types Theorem).

Exercise 2. Exercise 2.2.2, page 91.

Exercise 3. Exercise 2.2.4, page 91.

Exercise 4. Exercise 2.2.5, page 91.

Exercise 5. Exercise 2.2.6, page 91.

Deadline. Thursday, June 11.