

Phil 2310
Spring 2014

Assignment 7

This homework is due by the beginning of class on Mon, March 31th.

Part I:

Read Chapter 9 in our book.

Do problems 9.4 and 9.5 (Evaluating sentences at worlds)

Do problems 9.8 and 9.9 (Building a world)

Do problems 9.16 and 9.17 (lots of translations)

Part II:

None of the following pairs of sentences are equivalent. Equivalent sentences would always have the same truth value in any world so you can show that two sentences are not equivalent by building a world (or drawing a picture) where one of them is true and the other is false. Draw such a picture (one picture for each pair) and turn them in in class. Use filled and unfilled circles and squares.

1a) $\exists x \text{ Square}(x) \wedge \exists x \text{ Filled}(x)$

1b) $\exists x (\text{Square}(x) \wedge \text{Filled}(x))$

2a) $\neg \exists x (\text{Square}(x) \wedge \text{Filled}(x))$

2b) $\exists x (\text{Square}(x) \wedge \neg \text{Filled}(x))$

3a) $\exists x \text{ Square}(x) \rightarrow \exists x \text{ Filled}(x)$

3b) $\exists x (\text{Square}(x) \rightarrow \text{Filled}(x))$

4a) $\forall x \text{ Square}(x) \vee \forall x \text{ Filled}(x)$

4b) $\forall x (\text{Square}(x) \vee \text{Filled}(x))$

5a) $\neg \forall x (\text{Square}(x) \rightarrow \text{Filled}(x))$

5b) $\forall x (\text{Square}(x) \rightarrow \neg \text{Filled}(x))$

6a) $\forall x \text{ Square}(x) \rightarrow \forall x \text{ Filled}(x)$

6b) $\forall x (\text{Square}(x) \rightarrow \text{Filled}(x))$