

# PHI 100G : Logic and Critical Analysis

## Assignment Four

Before completing this assignment you should have read chapters 9–11 of *Language, Proof and Logic*.

1. Translation into FOL using quantifiers: do exercise 11.4
2. Understanding quantifiers: Translate the following sentences of FOL into (relatively) unambiguous, natural sounding English (paying careful attention to the meanings of the connectives, the scope and order of the quantifiers, and the order of the variables):
  - (a)  $\forall x(\text{Tasty}(x) \rightarrow \exists y(\text{Eats}(y, x)))$
  - (b)  $\forall x(\text{Tasty}(x) \wedge \exists y(\text{Eats}(y, x)))$
  - (c)  $\exists y\forall x(\text{Tasty}(x) \rightarrow \text{Eats}(y, x))$
  - (d)  $\forall x\text{Tasty}(x) \rightarrow \forall x\exists y\text{Eats}(y, x)$
3. (Difficult Translations) Do exercise 11.19 (which requires you to translate 5 sentences) (page 302)



- It is recommended that you reread the course's Academic Integrity policy before completing this assignment. ( <http://www.artsci.wustl.edu/~grussell/Phil100S07.html> )
- When you are finished, make sure the Grade Grinder sends your Submittable files to *your TA* at the appropriate email address (Ben if your surname starts with a letter between A and K (inclusive), David if it starts with an L or later letter. Their email addresses are [bfloydcl@wustl.edu](mailto:bfloydcl@wustl.edu) and [ddspeetz@wustl.edu](mailto:ddspeetz@wustl.edu) respectively.) Work that is to be “turned in” rather than submitted goes in the appropriate drawer of the turn-in cabinet in the Philosophy Department office in Wilson Hall.