1 The pseudo-adjective *non*- [2 points]

The prefix *non-* is not genuinely an adjective syntactically, but it can be a semantic modifier of nouns (for example, *non-student, non-conformist*), so we can ask how it fits into Partee’s typology of adjective meanings. For each of the meaning classes *intersective, subsective, non-subsective,* and *privative,* consider whether *non-* belongs in that class. If it doesn’t, provide a brief (1–2 sentence) argument for that conclusion, with at least one example from English. If it does, summarize your evidence in support of that conclusion (1–2 sentences).

2 Novel compounds [2 points]

In Levin et al.’s free-response comprehension experiment, the participant response distribution for *stew chickpea* was as follows:

<table>
<thead>
<tr>
<th>Metarelation</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose</td>
<td>14</td>
</tr>
<tr>
<td>Made of</td>
<td>2</td>
</tr>
</tbody>
</table>

Is this expected under their account? Say why or why not. In writing your answer, make sure to (1) classify the modifier, the head, and the compound itself as artifact or natural kind, and (2) make meaningful use of the relevant core hypothesis from their paper. (3–4 sentences should suffice.)
3 Functional application [2 points]

Reduce the following expressions by applying the necessary application and substitution steps. You should reduce the expressions as far as is possible, including subexpressions. The color-coding is just to help you (and me!) parse the examples correctly.

i. \( (\lambda x(x\text{ is definitely a number}) \lambda x(x\text{ is definitely a number}))\)

ii. \( (\lambda X(X \cap \{a, b, c\}) \lambda X(X \cap \{d, e, f\}))\)

iii. \( (\lambda f(\lambda x(f(x))) \lambda y(1 + y))\)

iv. \( (\lambda y(\lambda x(x > y)) \lambda y(1 + y))\)

4 Compositional analysis [2 points]

For each of the top (root) nodes in the following trees, provide (i) the name of the rule you used to derive that meaning from its constituent parts, according to the handout ‘Semantic composition’, and (ii) the meaning itself after all the allowable substitutions from function applications. Thus, for example, given the tree on the left, either answer at right would be complete and accurate:

For the purposes of this question, we extend the semantic grammar from the ‘Semantic composition’ handout with the following entry for \( hugs \):

\[ [hugs] = \lambda y(U - \{y\}) \]
5  A (non-existent) non-conservative determiner  [2 points]

Consider the hypothetical quantificational determiner *uny*:

\[ [\text{uny}] = \lambda X (\lambda Y (T \text{ if } |Y \cup X| > 0, \text{ else } F)) \]

Show that this hypothetical determiner is not conservative. To do this, you just need to find a counterexample – sets *A* and *B* that fail the conservativity test when given as arguments to \([\text{uny}]\) – and explain why those sets constitute a counterexample. Please do not give your argument in terms of English sentences. Since *uny* is not a real determiner, such sentences don’t make sense and so cannot carry the argument.

6  Monotonicity  [2 points]

Here is our usual definition of the quantificational determiner \([\text{most}]\):

\[ [\text{most}] = \lambda X (\lambda Y (T \text{ if } |X \cap Y| > |X - Y|, \text{ else } F)) \]

Diagnose the first (restriction) argument as upward, downward, or nonmonotone, and explain why this holds using \([\text{most}]\). (Note: this isn’t a question about your intuitions, but rather about what we are predicting with \([\text{most}]\).)

7  Existential pivots  [2 points]

The English existential construction is a predicational construction formed with *there* in subject position, as in *there are elephants (in the garden)*. The noun phrase *elephants* is the pivot phrase. Existential *there* is not to be confused with the locative *there* and can even be combined with it, as in *there are elephants there*.

Your task: On the basis of the following examples (where * marks ungrammatical cases, as usual), formulate a generalization about which quantifier phrases can appear as the pivot in an existential
construction. (A generalization is a single short statement, and that is all that is required. However, you might want to explain how the examples align with the generalization in order to get at least some credit if your generalization is incorrect.)

(1)  
   a. There is an elephant in the garden.  
   b. There are some elephants in the garden.  
   c. There are at least three elephants in the garden.  
   d. There are exactly three elephants in the garden.  
   e. There are approximately thirty elephants in the garden.  
   f. There are at most three elephants in the garden.  
   g. There are many elephants in the garden.  
   h. There are few elephants in the garden.  
   i. There are no elephants in the garden.  

(2)  
   a. *There is every elephant in the garden.  
   b. *There is not every elephant in the garden.  
   c. *There are most elephants in the garden.

Please restrict your attention to this set of examples when formulating your generalization, and accept the grammaticality judgments as given (even if you disagree with them).