1. [8] **Fill in the missing labels** for the nodes in the tree below. Where a node is the maximal projection of a lexical item, indicate it with the standard “X-bar” notation (e.g., NP for the maximal projection of a noun, $v'$ for an intermediate projection of $v$). The sentence is *Milo can decode messages from anyone*. The arrow is for use in question 4.

```
NP
  Milo
  M+T
    can
    <M>
      <NP>
        V+v
          decode
            <V>
              NP
                messages
                  P
                    from
                      NP
                        anyone
```

2. [6] In the sentence for which the structure is given above:
   a. Is *messages from anyone* a constituent?
   b. Is *decode messages* a constituent?
   c. Is *decode messages from anyone* a constituent?
   d. What is the specifier of TP?
   e. What is the complement of T?
   f. Does *decode* dominate *from anyone*?

3. [2] **Circle one**: The verb shown in the structure above is
   ditransitive / transitive / unergative / unaccusative

4. [2] Circle every node in the tree above c-commanded by the node designated by the arrow.

5. [2] Name the θ-role that *Milo* has:
6. Suppose we start building a structure for a sentence, and at a certain stage we wind up with a \( \nu P \) as shown (abstractly) below.

\[
\begin{array}{c}
\text{vP} \\
\text{\textbf{vP}} \\
\text{\textbf{P}} \\
\text{\textbf{P}} \\
\text{\textbf{NP}} \\
\text{\textbf{NP}} \\
\text{\textbf{NP}} \\
\text{\textbf{NP}} \\
\text{\textbf{NP}} \\
\text{\textbf{PP}} \\
\end{array}
\]

a. [2] Name the \( \theta \)-role that the \( \text{NP}^{2} \) will have.

b. [2] If \( \text{NP}^{2} \) were an anaphor, which NPs could serve as an antecedent? (That is: Which NPs could potentially bind \( \text{NP}^{2} \)?)

c. [2] How many \([uP]\) features were there, total, in these lexical items initially?

d. [3] Which of the following three sentences might plausibly include this kind of \( \nu P \)?

1. I paint portraits in vibrant watercolors on Tuesdays.
2. I give catnip to eager cats in Summer.
3. I buy coffee with extra sugar at noon.

7. [2] Circle one: The verb shown in the structure above is
ditransitive / transitive / unergative / unaccusative

8. Binding Theory. The sentence below is “trying to mean” \textit{Mary convinced herself that John likes her (Mary)}. Two questions, about the sentence below:

\( ^* \text{She}_{i} \text{ convinced Mary}_{i} \text{ that John likes herself}_{i}. \)

a. [3] Why can’t \textit{Mary} serve as the antecedent for \textit{herself}?

b. [2] Which Principle of Binding Theory is \textit{not} violated in this sentence?
9. Suppose you had a sentence with the following abstract structure. I have provided two lexical items (the NP dinner and the verb burn). *Fall 2009 note: You will need to change the verb form in part (c) to whatever is appropriate, “burn” here is intended to represent the basic uninflected form. Assume too that the T is a present tense (nonpast) T.

\[
\text{TP} \quad \text{NP} \\
\text{T'} \quad \text{T} \quad \text{Perf} \quad \text{PerfP} \\
\text{[N]} \quad \text{Perf+T} \quad \text{[…pres…]} \quad \text{vP} \\
\text{<Perf>} \quad \text{<NP>} \quad \text{v'} \\
\text{v} \quad \text{<V>} \quad \text{<NP>} \\
\text{burn} \quad \text{dinner} \quad \text{[N]}
\]

a. [2] Irrelevant for Fall 2009, asks about something we haven’t covered.

b. [2] Irrelevant for Fall 2009, asks about something we haven’t covered.

c. [3] Write the sentence that this would be the structure for.

d. [2] What was the motivation to Merge v’ and NP?

e. [2] What was the motivation to Merge Perf and vP?

10. [3] What makes the following sentence ungrammatical, in terms of the system developed in class? (A grammatical sentence can be made using all the same lexical items—what is different about the sentence below? Why is it ungrammatical?)

*Patricia was not having eaten vegetables.